

MONOGRAPH
2005

Health Services in Alabama Public Schools

Academic Year 2003-2004

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Alabama Board of Nursing
Montgomery, Alabama
November 30, 2005

ACKNOWLEDGEMENTS

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BACKGROUND

In December 2001, the Alabama Board of Nursing (ABN) enacted Alabama Board of Nursing Administrative Code, Chapter 610-X-6, Standards of Nursing Practice. A key provision of the new regulations was a section specific to school nurse practice, including delegation of some specific tasks to unlicensed assistive personnel in the school setting (Section .06(9)). The regulations allow school nurses to delegate assistance with oral, topical, inhalation, eye, ear, nose and injectable epinephrine (e.g., Epi-pen®) medications to unlicensed school personnel when certain conditions are met. The conditions for delegation required that unlicensed school personnel successfully complete an ABN-approved 24-hour curriculum following their selection by the school nurse. The unlicensed school personnel were also required to demonstrate competence in performing the delegated tasks.

The ABN approved the curriculum in the spring of 2003. ABN staff pilot tested the curriculum on May 22, 2003 with school nurse volunteers who suggested slight changes for the curriculum and written examination. The curriculum and the examination were provided to school nurses from each local education agency (LEA) following statewide announcements of available training sessions. In addition, Dr. Gay Allen and Martha Holloway of the State Department of Education (SDE) developed a PowerPoint presentation of the approved curriculum. Diskette copies of the PowerPoint presentation were distributed to each school system and posted on the ABN web site, www.abn.state.al.us. Seven train-the-trainer sessions were provided for school nurses in June and July 2003. Over 350 school nurses attended the training and were provided continuing education hours for participation in the sessions. Each participant was asked to provide feedback to the ABN and to the SDE regarding the required 24

hours of training and whether the training could safely be completed in less than 24 hours.

The rules specified, "The School Nurse Consultant or School Nurse Administrator shall submit a report(s) to the Alabama Board of Nursing in a format specified by the Board upon request" ABN Administrative Code, Chapter 610-X-6-.06(9). For the first report, public school nurses in Alabama completed a *Medication Monitoring School Report* during the academic year 2003-2004. The purpose of the report was to obtain accurate, current data from public schools regarding medications and health care procedures performed and/or delegated to unlicensed school personnel by school nurses. Data regarding medications provided to public school students in Alabama were anecdotal prior to the required report.

The report consisted of responses to 42 items regarding health care procedures and medications provided for students for the academic year 2003-2004. Each school site maintained and completed a separate report. The school nurses submitted the report to the SDE and to the ABN at the end of the academic year. A copy of the report is included in Appendix B.

SAMPLE

School nurses employed by local boards of education in Alabama public schools (kindergarten through twelfth grade) monitored the 42 items included in the report for each of their assigned schools for one academic year. In 2003-2004, there were 129 school systems including 1,529 schools. Reports were received from 117 of the 129 school systems, providing a 90.69% response rate. School systems providing reports are included in Appendix A. In November 2003, the ABN sent reminder letters to those

systems not responding. The following twelve school systems received reminder letters, but did not submit reports:

- Bibb County
- Clay County
- Conecuh County
- Dallas County
- Anniston City
- Bessemer City
- Hoover City
- Lanett City
- Midfield City
- Tallassee City
- Tarrant City
- Leeds City

Bessemer City and Tarrant City Systems did not report data due to attrition and transitions in school nurse staffing. Leeds City, a newly established school system, reported that a school nurse was not employed during the summer training and school personnel were unaware of the reporting requirements. No information is available regarding the remaining non-reporting systems.

ANALYSIS

The data from the reports were analyzed using simple descriptive statistics (counts, means, and sums) for each item. Additionally, related items (e.g., medications for ADD/ADHD) were combined and analyzed as appropriate (See Appendix for charts of all items).

LIMITATIONS

School system employees, both licensed and unlicensed, self-reported these data, therefore, the accuracy and consistency of these reports is uncertain. The investigator questioned the validity of the responses to 18 of the 42 items due to obvious inconsistencies in the interpretation of items by the school nurse. Some

respondents appeared to answer a different question than the one asked in the report. The results reflected responses that were unexplainable based on the size of certain school systems and the associated responses for each item. From these data, for example, the investigator concluded that respondents may have answered the question, *"number of visits made to supervise LPNs,"* rather than *"number of LPNs supervised."* One small city system reported over 210 LPNs. Obviously, these data were questionable. Issues of questionable data and questions for future versions of the data collection instrument are addressed (See Appendix D to view responses for questionable items).

FINDINGS: MEDICATIONS

School nurses from 117 of 129 school systems reported that a total of 1,060,796 doses of medication were provided to students during academic year 2003-2004. Unlicensed school personnel assisted students with 656,938 doses of total medications provided. The most frequently provided medications during the school day, 529,822 doses, were to treat attention deficit disorder (ADD) or attention deficit hyperactivity disorder (ADHD). Interestingly, one small, rural school system reported providing more medications to treat students with ADD/ADHD medications than one of the largest school systems in the state.

Fifty-six school systems reported that 1,702 students had orders for Diastat® suppositories. Diastat® is a medication used primarily to treat seizures. Geographic differences were noted for some items. For example, school systems in the southern part of the state reported very few diabetic students with orders for glucagon or diabetic students with insulin pumps. However, systems in the central to northern parts of the

state reported high numbers of diabetic students with orders for glucagon and diabetic students with insulin pumps, possibly indicative of differences in treatment provided for children with diabetes relative to where they live in Alabama. Overall, 8,159 diabetic students received insulin via insulin pumps or by injection.

Over 17,000 doses of topical medications were provided for students. Some 7,000 of these topical medications were reported by one system, but it is unknown what types of topical medications were needed or provided for these students. Additionally, it is unknown what types of other medications would account for over 160,000 doses of medications reported in the "other" category. Tables 1 and 2 and Figures 1-5 display the particular types of medications and the doses provided:

TABLE 1: TYPES OF MEDICATIONS AND DOSES PROVIDED: 117 OF 129 SYSTEMS REPORTING

TYPE OF MEDICATION	TOTAL DOSES REPORTED
ADD/ADHD	529,822
Asthma-related (inhalers, breathing treatments, etc)	224,313
Seizure-related	37,765
Analgesics/Anti-inflammatory	77,221
Topicals	17,369
Antibiotics	10,693
Other medications	163,613
Total Doses of Medications	1,060,796

FIGURE 1: TOTAL MEDICATIONS BY TYPE

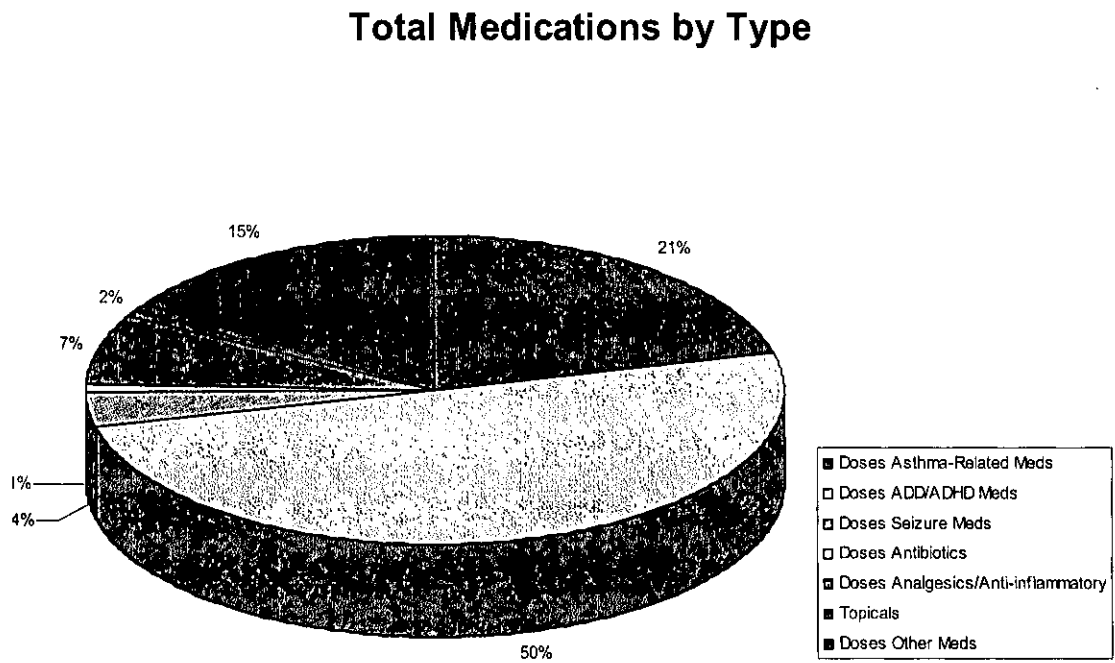


FIGURE 2: TOTAL ADD/ADHD MEDICATIONS

TOTAL ADD/ADHD MEDICATIONS

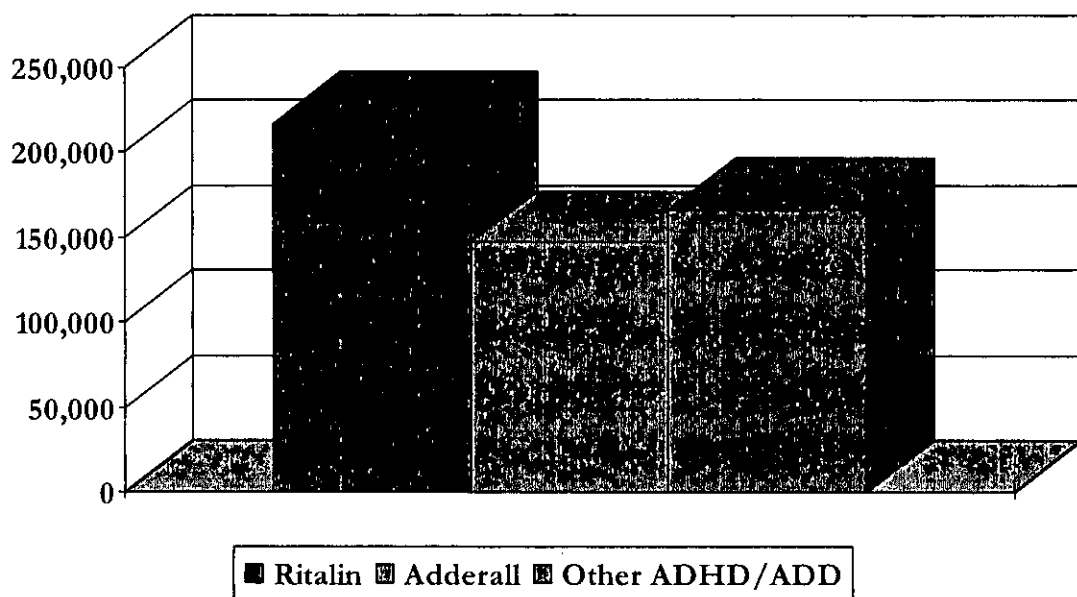


TABLE 2: DIABETES-RELATED: 117 OF 129 SYSTEMS REPORTING

DIABETES-RELATED	TOTAL STUDENTS
Students with glucagon injection ordered as needed	4,975
Students with Insulin Injections ordered	5,101
Students with Insulin Pumps	3,058

FIGURE 3: DIABETES-RELATED

DIABETES-RELATED

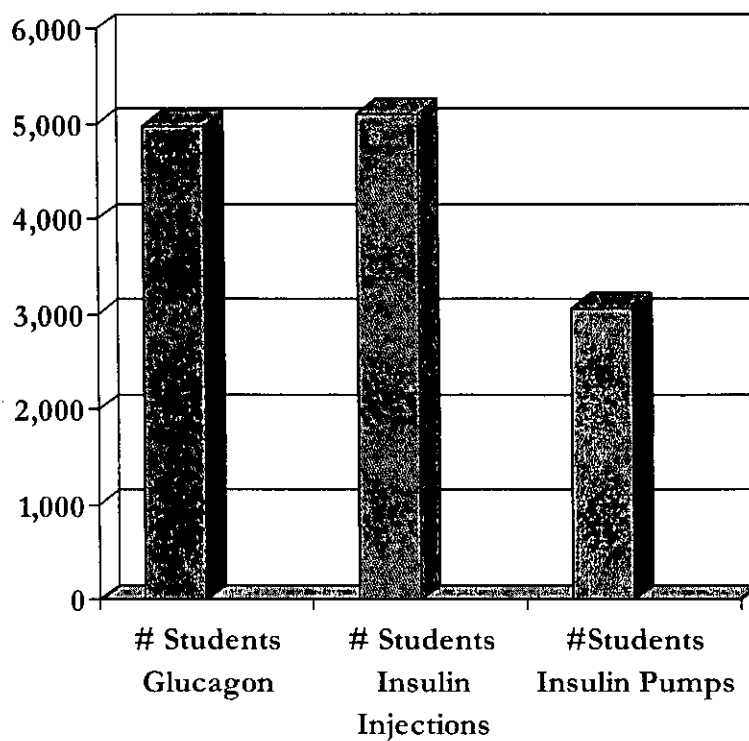


FIGURE 4: ASTHMA-RELATED

TOTAL ASTHMA-RELATED

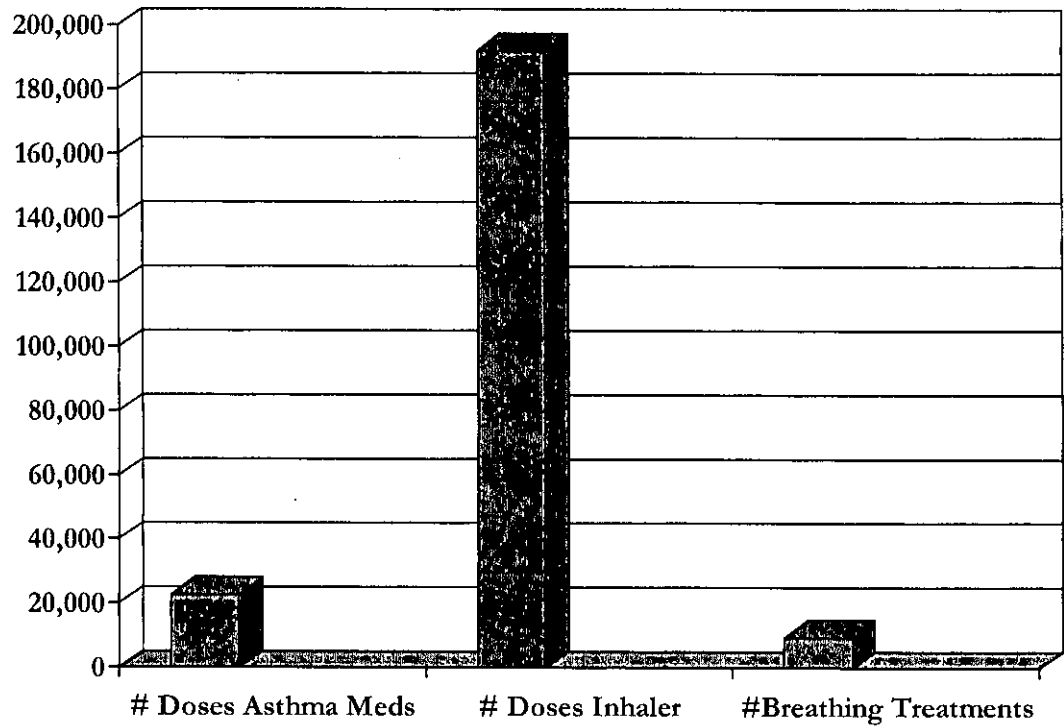
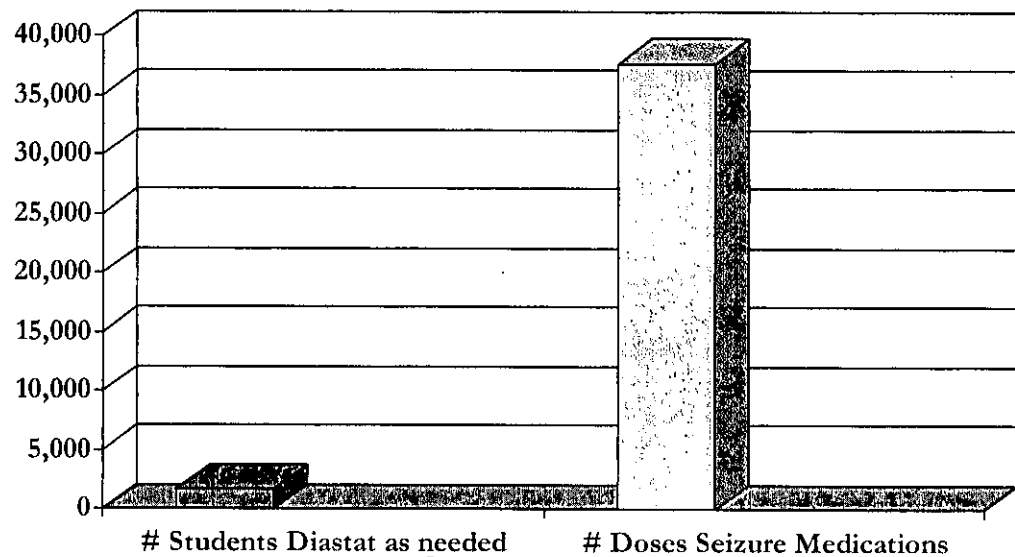


FIGURE 5: SEIZURE-RELATED

TOTAL SEIZURE-RELATED



Some items evidenced discrepancies in the responses, which made these data questionable. These questionable items were excluded from the analysis. For example, 24 occurrences of students experiencing allergic reaction to medications were reported statewide, but 25 occurrences were reported to parents. Additionally, 36 students were reportedly sent home with a parent due to an allergic reaction to medication. Statewide, 17 systems reported at least one occurrence of lost/stolen medication with five systems indicating that lost/stolen medications were reported to law enforcement.

Due to these discrepancies and/or small numbers of occurrences reported statewide, most of the items addressing these areas are included in the Appendix, as boxplot charts, but not considered valid data. Boxplot charts summarize each variable's distribution of responses over all cases (e.g., school systems) and illustrate the location of outliers within the data. The box itself shows the range of the middle 50% of the distribution while the lines extending out from the box show the approximate value of the 10th and 90th percentile points. All values beyond those limits are considered outliers and are labeled.

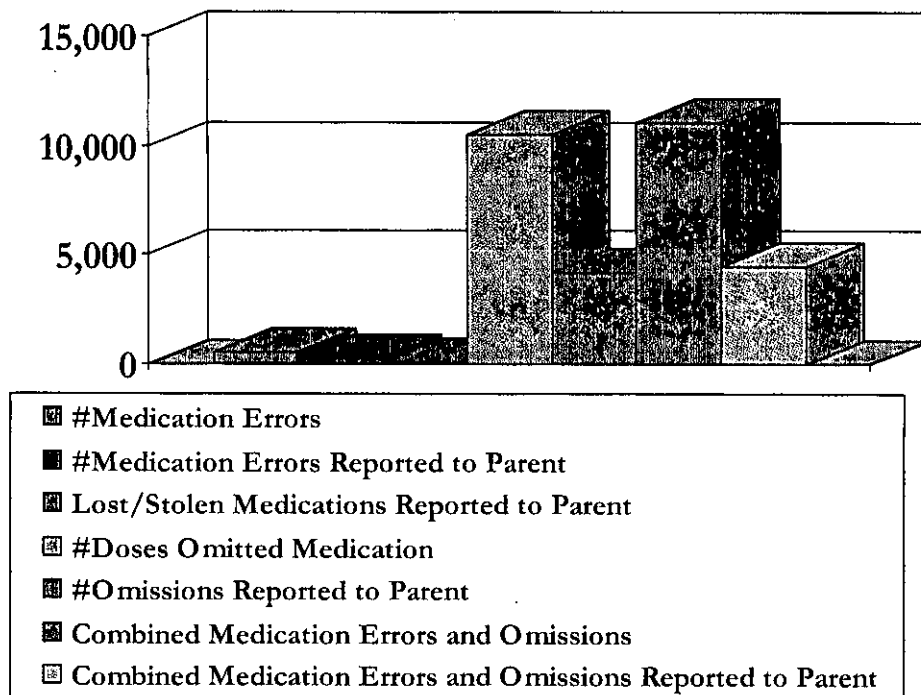
Table 3 and Figure 6 highlight data regarding medication errors, omissions, and reports to parents regarding errors and omissions. From these data, school nurses notify parents less than half of the time when medications are omitted or when medication errors are made. Some school nurses reported omitting doses of medication because the medications were not available at school. However, these data raise additional policy questions that the school nurse and school administrators should address regarding omitted medications and parental notification of omissions.

TABLE 3: MEDICATION ERRORS, OMISSIONS, AND REPORTING: 117 OF 129 SYSTEMS REPORTING

MEDICATION ERRORS, OMISSIONS, AND REPORTING	TOTAL REPORTED
Medication Errors	525
Medication Errors Reported to Parent	250
Lost/Stolen Medications Reported to Parent	37
Doses of Omitted Medications	10,559
Number of Omissions Reported to Parent	4,187
Combined Medication Errors & Omissions	11,084
Combined Medication Errors & Omissions Reported to Parent	4,437

FIGURE 6: ERRORS AND OMISSIONS

TOTAL ERRORS AND OMISSIONS



FINDINGS: INVASIVE HEALTH PROCEDURES: 117 OF 129 SYSTEMS REPORTING

A review of Table 4 and Figure 7 reveals that students require a variety of invasive health procedures during the school day. However, careful review of these data raise additional questions. For example, 37,121 tube feedings were reported, but the largest school system in the state reported only 418 tube feedings. However, another large system reported 5,974 tube feedings. If one assumes that one student requiring tube feeding one time per day for 180 school days, the 5,974 tube feedings might involve approximately 33 students. That number of students requiring tube feeding might be reasonable to expect for a large system. However, if one applies the same assumption to a system reporting 418 tube feedings, it would involve only two to three students. That number appears unreasonable for the largest school system in the state. Based on this item, it appears safe to report that there were at least 37,121 tube feedings in the state. The investigator concluded that some school nurses may have reported the "*number of students requiring tube feeding*", rather than answering the question of "*number of tube feedings provided*" as required in the report (See Appendix B for data collection form).

Similar problems occurred with reporting urinary catheterizations. The investigator concluded that some school nurses may have reported the "*number of students requiring catheterization*", rather than reporting the "*number of catheterization procedures performed*" (See Appendix B for data collection form). However, it appears safe to report school nurses performed at least 14,837 urinary catheterizations in the state.

The intent of asking the nurses to report the number of procedures rather than number of students requiring the procedures was to obtain a clearer understanding of

the role of the school nurse and the time required for the nurse to perform the health services required by students. However, this question resulted in inconsistencies in responses.

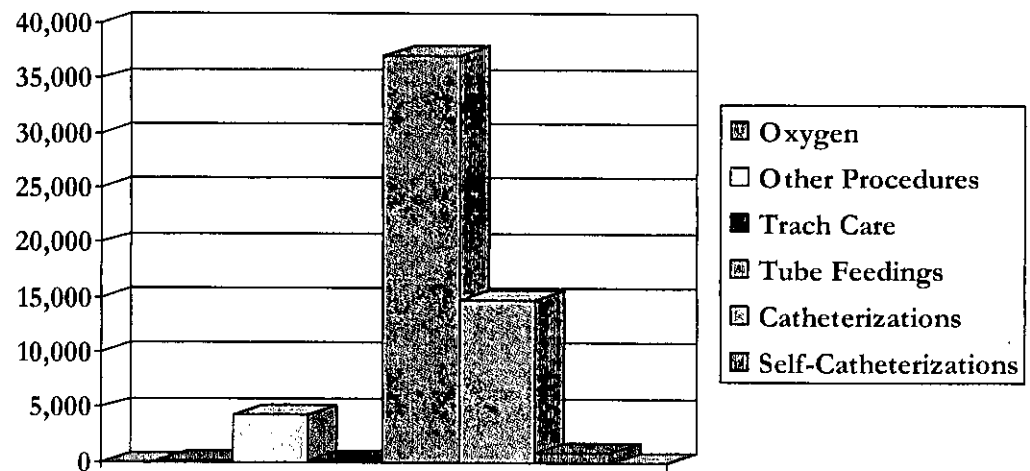
TABLE 4:

PROCEDURES PERFORMED DURING THE SCHOOL DAY: 117 OF 129 SYSTEMS REPORTING

INVASIVE HEALTH PROCEDURES	TOTAL REPORTED
Number of Tube Feedings Provided by Nurse	37,121
Number of Urinary Catheterizations Provided by Nurse	14,837
Number of Students Performing Self-Catheterization	859
Oxygen As Needed	176
Tracheotomy Care	186
Ventilator Dependent	1
Other Procedures	4,333

FIGURE 7: TOTAL INVASIVE HEALTH PROCEDURES

TOTAL PROCEDURES



IMPLICATIONS

The general public's perception of the role of public schools is to provide education for students. However, this perception is somewhat challenged by the sheer numbers of medications and invasive health procedures that are required by students during the school day. A secondary role and legal requirement of public schools is to provide health services required by students.

The ABN's legal mandate is protection of the public's health, safety, and welfare. Children are some of the most vulnerable members of the public. The ABN revised the rules regarding school nurse practice with the intention to provide better protection of school children. With the collection of these health services data, the ABN has a better understanding of the role of the school nurse and the health procedures and medications commonly provided for Alabama public school students.

RECOMMENDATIONS

The ABN should collect additional data on a periodic basis to assess the health services requirements of the school age population. The data collection tool used for the 2003-2004 academic year proved cumbersome for school nurses. Data were collected for 42 items and at least 18 of those items were removed from analysis due to questionable validity and reliability of the data collection tool. The ABN should revise the data collection tool to focus on a few specific categories of interest (e.g., tube feedings, medications). The revised instrument should be converted to an online survey that school nurses will complete and submit direct to the ABN in an electronic format. The ABN could then complete a summary report from these data and share with

stakeholders in nursing, education, and the public to create awareness of the health needs of students during the school day. These data should be shared with the SDE, school superintendents, legislators, and other stakeholders to demonstrate the growing demand on schools to provide health services for students. The ABN should continue to use the results of future data collection as a guide to regulatory needs in school nurse practice and to revise the administrative rules as needed to protect the public.

APPENDIX A

SCHOOL SYSTEMS RESPONDING

LIST OF SCHOOL SYSTEMS PROVIDING REPORTS

Autauga County	Marshall County	Haleyville City
Baldwin County	Mobile County	Hartselle City
Barbour County	Monroe County	Homewood City
Blount County	Montgomery County	Huntsville City
Bullock County	Morgan County	Jacksonville City
Butler County	Perry County	Jasper City
Calhoun County	Pickens County	Linden City
Chambers County	Pike County	Madison City
Cherokee County	Randolph County	Mountain Brook City
Chilton County	Russell County	Muscle Shoals City
Choctaw County	St Clair County	Oneonta City
Clarke County	Shelby County	Opelika City
Cleburne County	Sumter County	Opp City
Coffee County	Talladega County	Oxford City
Colbert County	Tallapoosa County	Ozark City
Coosa County	Tuscaloosa County	Pell City
Covington County	Walker County	Phenix City
Crenshaw County	Washington County	Piedmont City
Cullman County	Wilcox County	Roanoke City
Dale County	Winston County	Russellville City
DeKalb County	Albertville City	Scottsboro City
Elmore County	Alexander City	Selma City
Escambia County	Andalusia City	Sheffield City
Etowah County	Arab City	Sylacauga City
Fayette County	Athens City	Talladega City
Franklin County	Attalla City	Thomasville City
Geneva County	Auburn City	Troy City
Greene County	Birmingham City	Tuscaloosa City
Hale County	Brewton City	Tuscumbia City
Henry County	Cullman City	Vestavia Hills City
Houston County	Daleville City	Winfield City
Jackson County	Decatur City	
Jefferson County	Demopolis City	
Lamar County	Dothan City	
Lauderdale County	Elba City	
Lawrence County	Enterprise City	
Lee County	Eufaula City	
Limestone County	Fairfield City	
Lowndes County	Florence City	
Macon County	Fort Payne City	
Madison County	Gadsden City	
Marengo County	Geneva City	
Marion County	Guntersville City	

APPENDIX B

MEDICATION MONITORING REPORT PAGE 1

Page 1	SUPERVISION/MONITORING						TYPES OF MEDICATION PROVIDED														
							ADHD			ASTHMA			DIABETES			SEIZURE		MISC.			
	# OF LICENSED PRACTICAL NURSES SUPERVISED	# OF VISITS MADE PROVIDING SUPERVISION OF LPN's	# OF UAP ASSISTING WITH MEDICATION	# OF UAP MONITORING VISITS MADE	# OF DOSES OF MEDICATION PROVIDED	# OF UAP WITH DELEGATION (assisting with medication) D/C	# OF DOSES OF RITALIN PROVIDED	# OF DOSES OF ADDERALL PROVIDED	# OF DOSES OF OTHER ADD/ADHD MEDICATION PROVIDED	# OF DOSES OF ASTHMA MEDICATION PROVIDED	# OF DOSES OF INHALER MEDICATION PROVIDED	# OF BREATHING TREATMENTS PROVIDED	# OF STUDENTS WITH GLUCAGON INJECTION ORDERED PRN	# OF STUDENTS WITH INSULIN INJECTIONS ORDERED	# OF STUDENTS WITH INSULIN PUMP	# OF STUDENTS WITH DIASTAT SUPPOSITORY ORDERED PRN	# OF DOSES OF SEIZURE MEDICATION PROVIDED	# OF DOSES OF ANTIBIOTICS PROVIDED	# OF DOSES OF ANALGESICS/ANTI-INFLAMMATORY PROVIDED	# OF DOSES OF TOPICAL MEDICATION PROVIDED	# OF DOSES OF OTHER MEDICATIONS PROVIDED
MONTHS																					
AUGUST																					
SEPTEMBER																					
OCTOBER																					
NOVEMBER																					
DECEMBER																					
JANUARY																					
FEBRUARY																					
MARCH																					
APRIL																					
MAY																					
JUNE																					
JULY																					
TOTAL																					

APPENDIX B

MEDICATION MONITORING REPORT PAGE 2

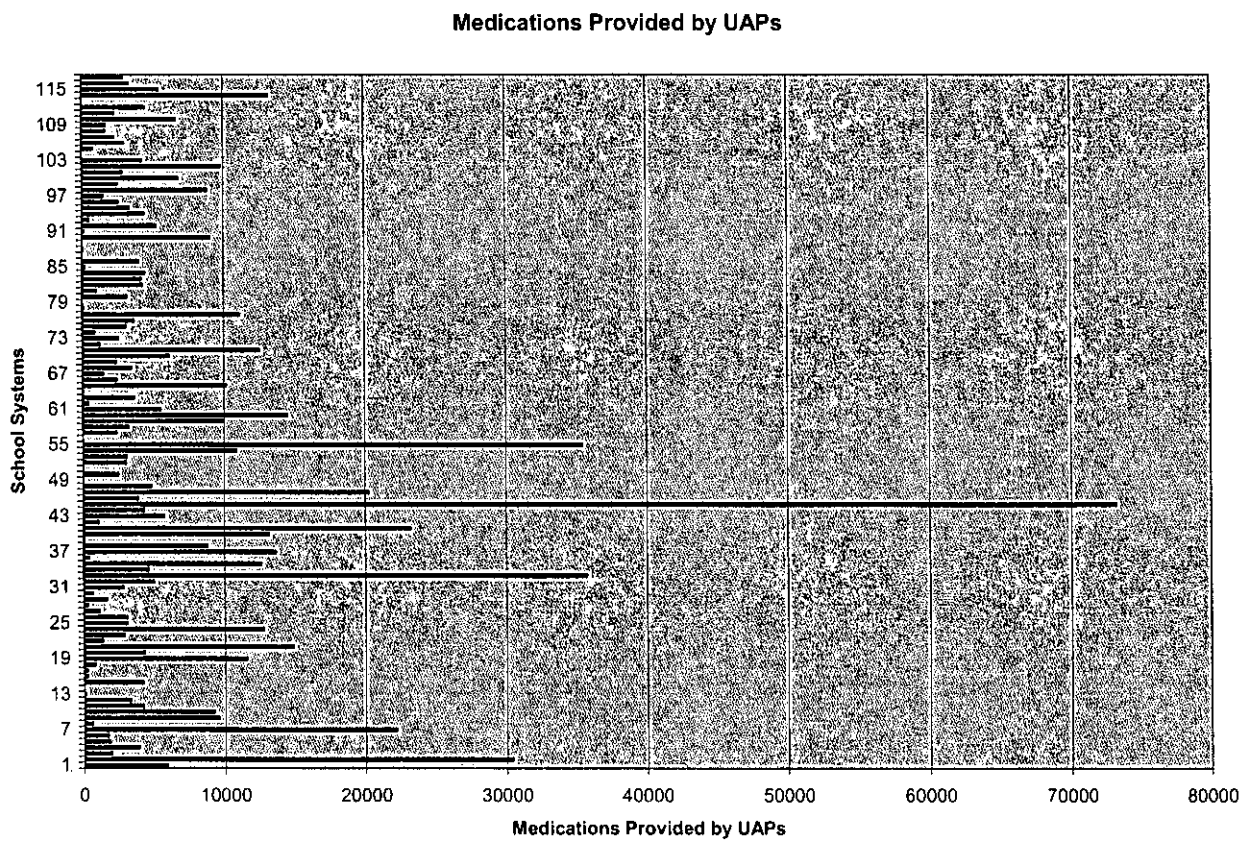
Page 2	UNUSUAL OCCURRENCE SUMMARY												PROCEDURES PROVIDED BY RN/LPN (NON-DELEGATABLE)								
	MEDICATION ERRORS				LOST/STOLEN MEDS.		ALLERGIC REACTIONS				OMISSION										
MONTHS	# OF MEDICATION ERRORS (INCORRECT CHILD, DRUG, ROUTE, TIME, DOSAGE, AND/OR DOCUMENTATION)	# OF ERRORS REPORTED TO PARENT/GUARDIAN	# OF STUDENTS SENT HOME TO PARENT/GUARDIAN	# OF STUDENTS SENT TO HEALTH CARE PROVIDER/E.R.	# OF OCCURRENCES OF LOST/STOLEN MEDS.	# OF OCCURRENCES REPORTED TO PARENT/GUARDIAN	# OF OCCURRENCES REPORTED TO HEALTH CARE PROVIDER	# OF OCCURRENCES REPORTED TO LAW ENFORCEMENT	# OF STUDENTS WITH ALLERGIC REACTIONS TO MEDS.	# REPORTED TO PARENT/GUARDIAN	# OF STUDENTS SENT HOME WITH PARENT/GUARDIAN	# OF STUDENTS SENT TO HEALTH CARE PROVIDER/E.R.	# OF MEDICATION DOSES OMITTED	# OF OMISSIONS REPORTED TO PARENT/GUARDIAN	# OF TUBE FEEDINGS PROVIDED	# OF CATHETERIZATIONS PROVIDED	# OF STUDENTS PERFORMING SELF CATHETERIZATIONS	# OF STUDENTS PROVIDED TRACH CARE	# OF STUDENTS PROVIDED OXYGEN PRN	# OF STUDENTS VENTILATOR DEPENDENT	# STUDENTS REQUIRING OTHER PROCEDURES
AUGUST																					
SEPTEMBER																					
OCTOBER																					
NOVEMBER																					
DECEMBER																					
JANUARY																					
FEBRUARY																					
MARCH																					
APRIL																					
MAY																					
JUNE																					
JULY																					
TOTAL																					

APPENDIX C

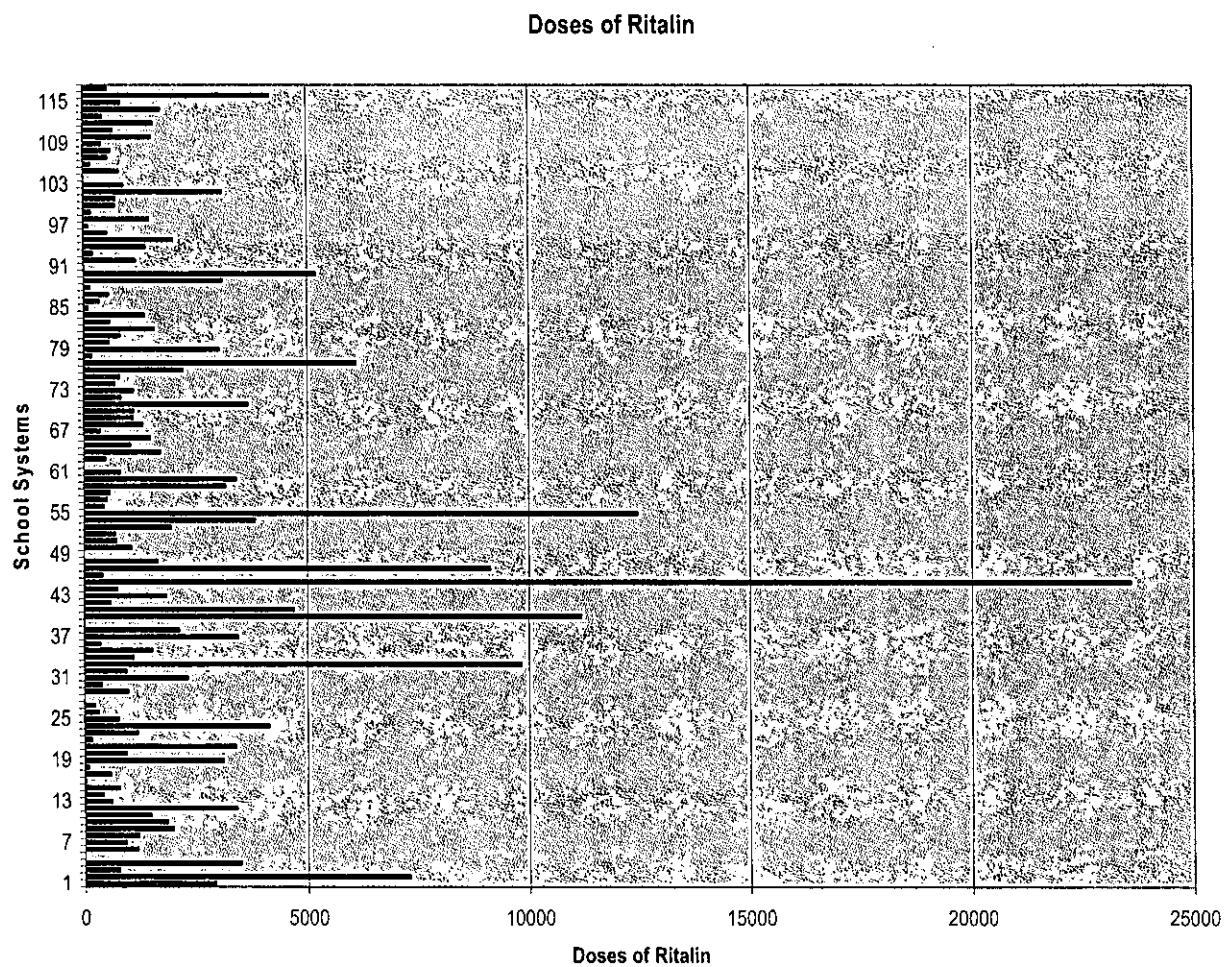
DATA ITEMS

ITEM #5

NUMBER OF DOSES OF MEDICATION PROVIDED

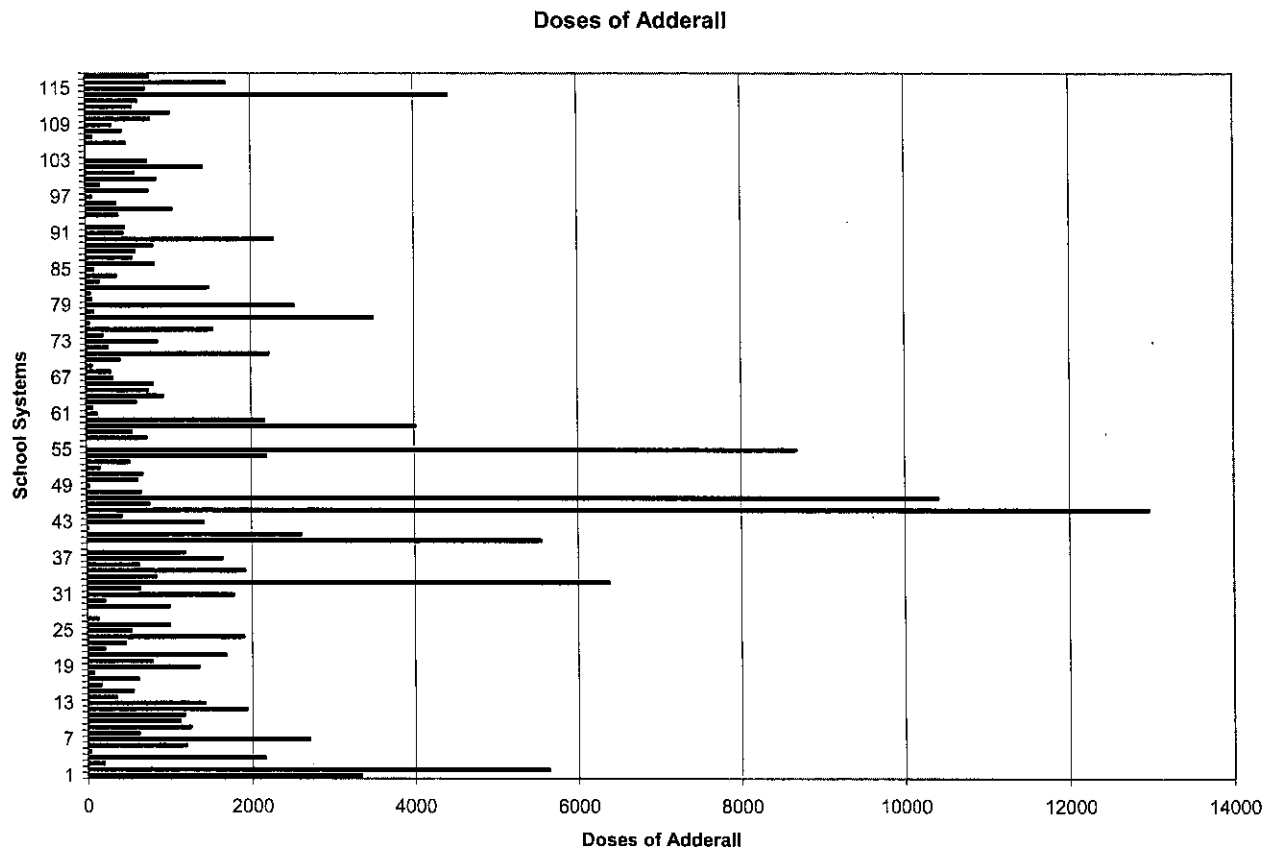


ITEM #7
NUMBER OF DOSES OF RITALIN PROVIDED



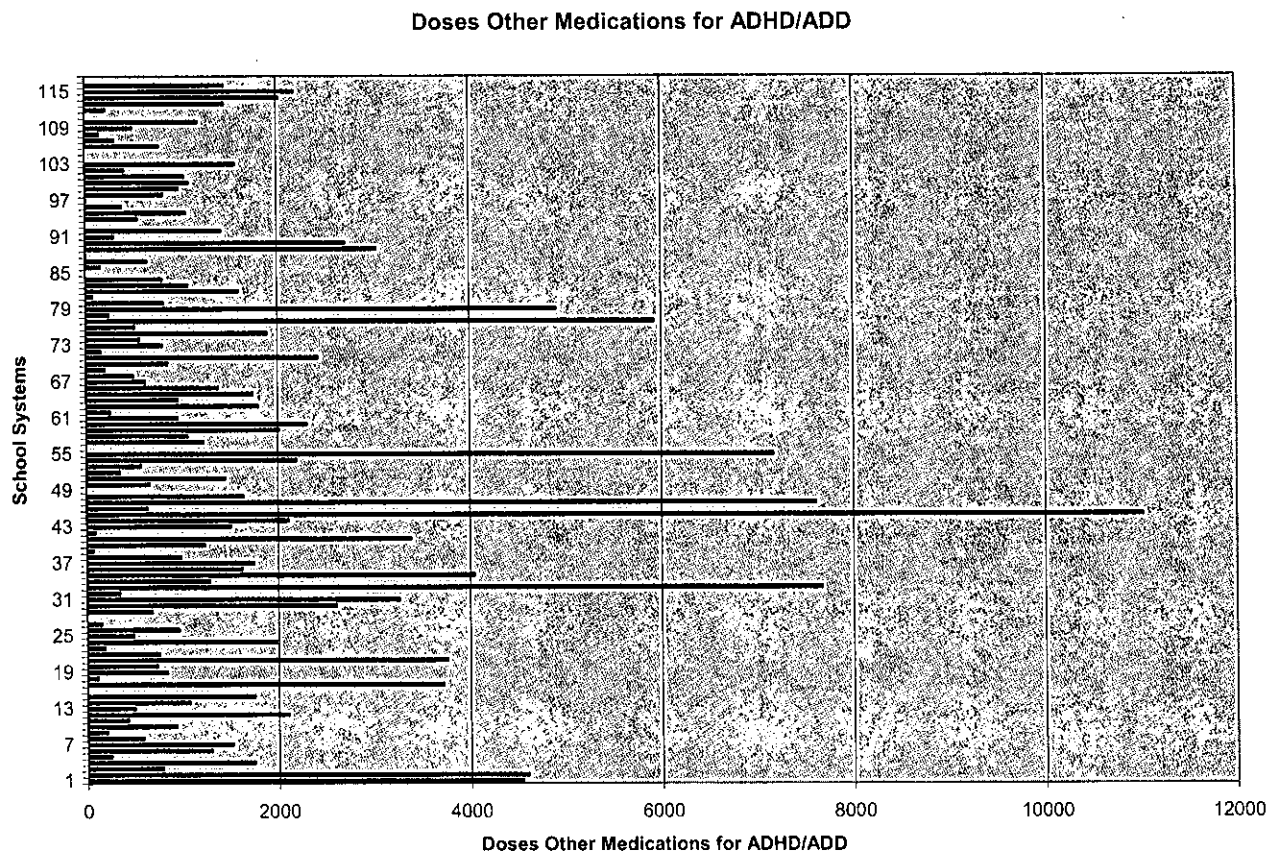
ITEM #8

NUMBER OF DOSES OF ADDERALL PROVIDED



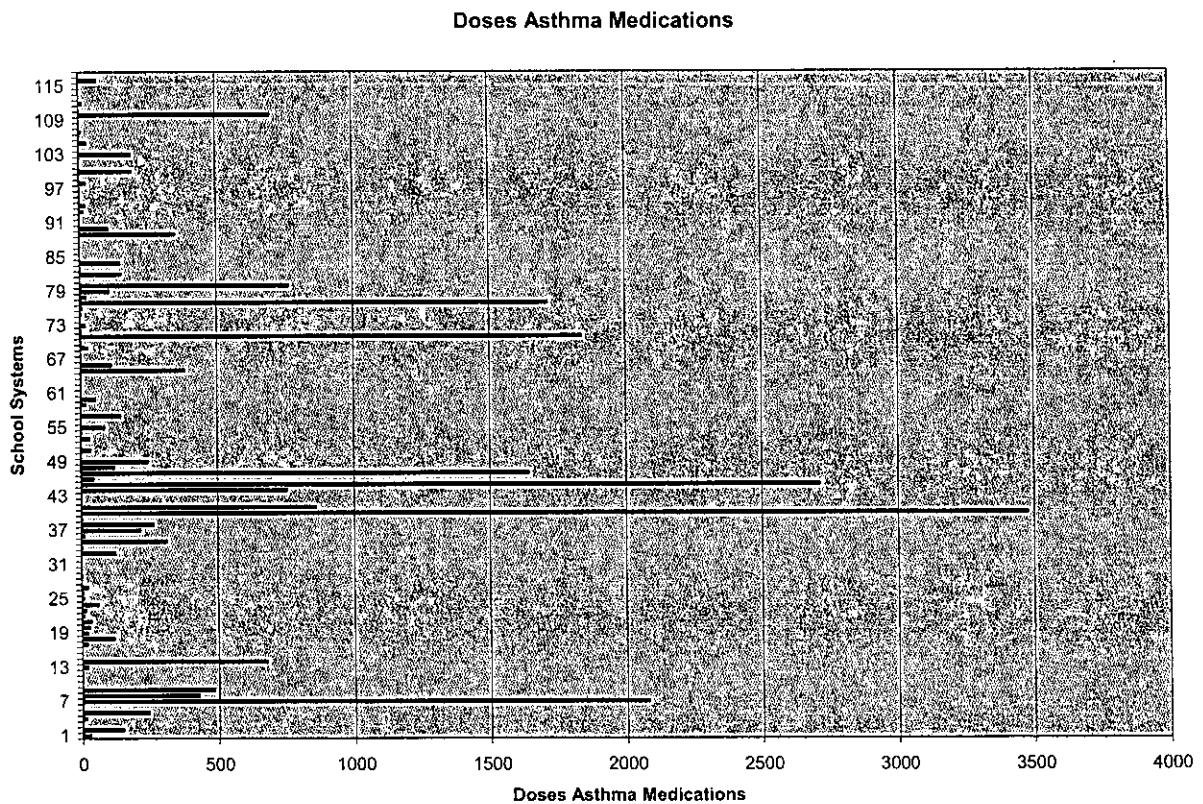
ITEM #9

NUMBER OF DOSES OF OTHER ADD/ADHD MEDICATIONS PROVIDED



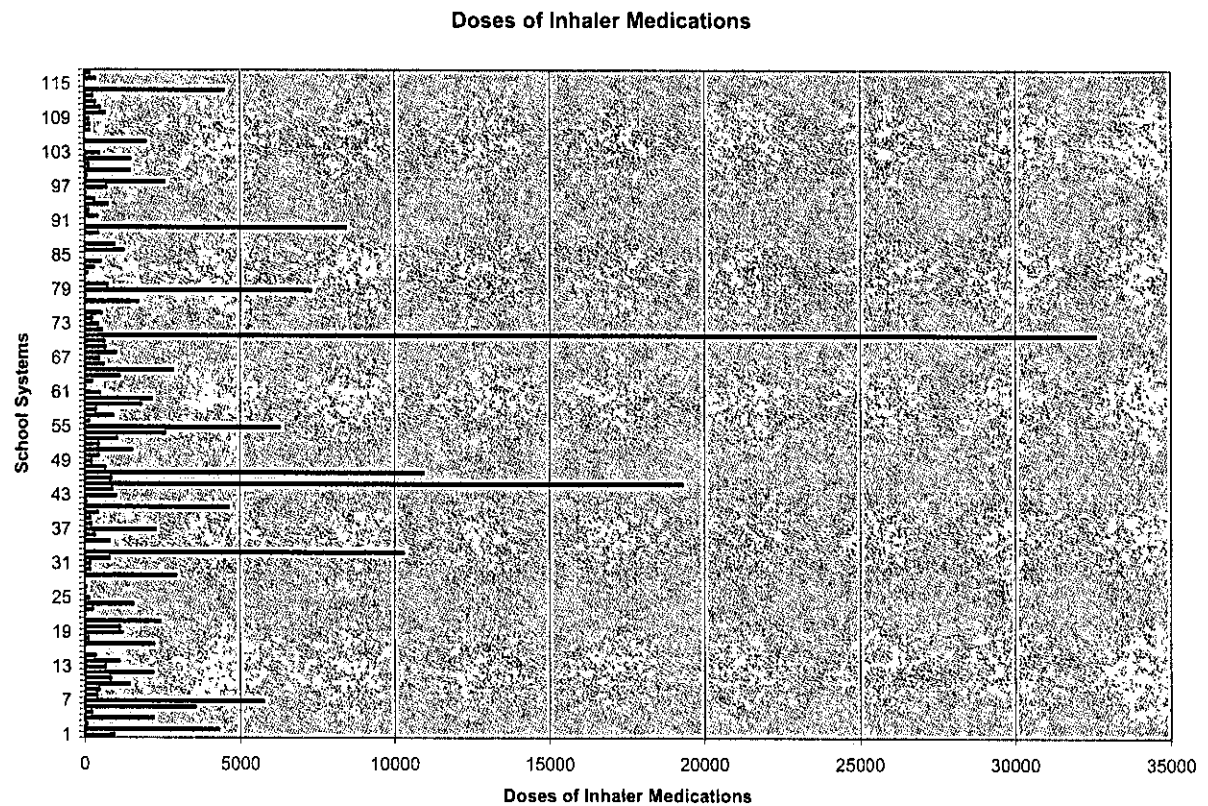
ITEM #10

NUMBER OF DOSES OF ASTHMA MEDICATION PROVIDED



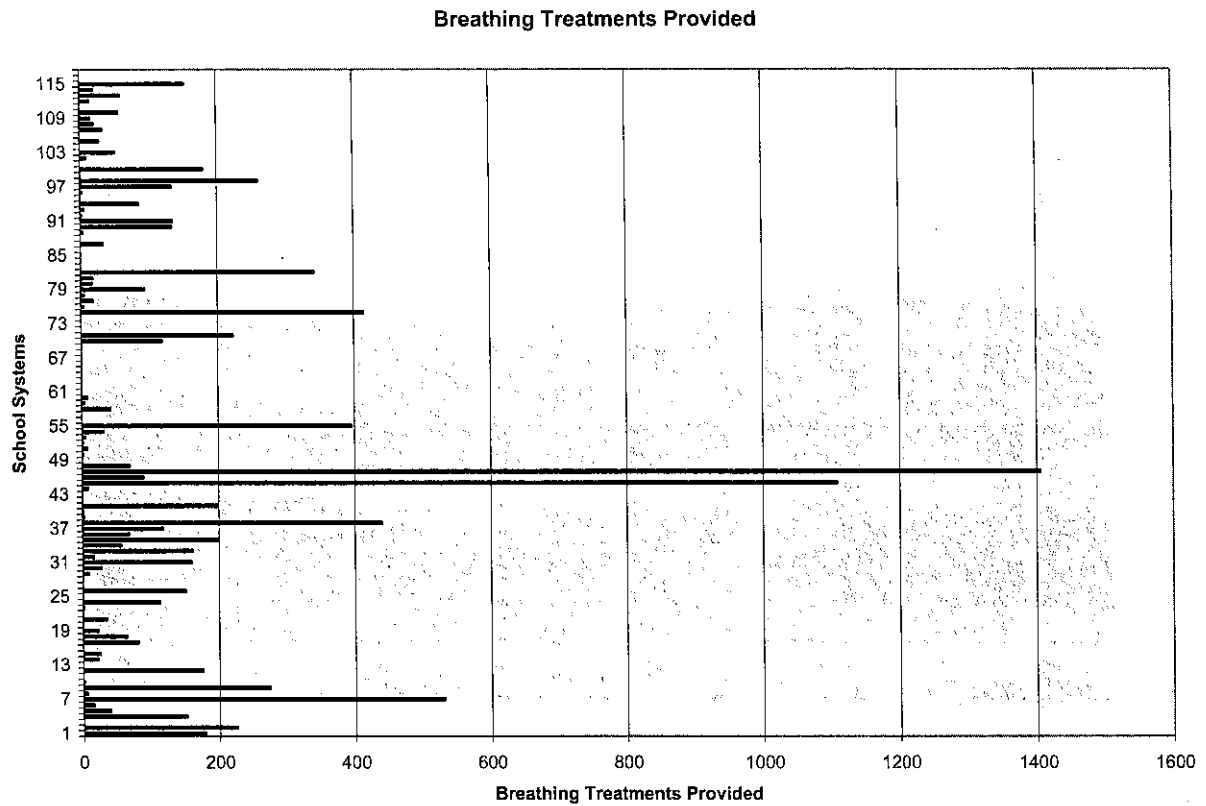
ITEM #11

NUMBER OF DOSES OF INHALER MEDICATION PROVIDED



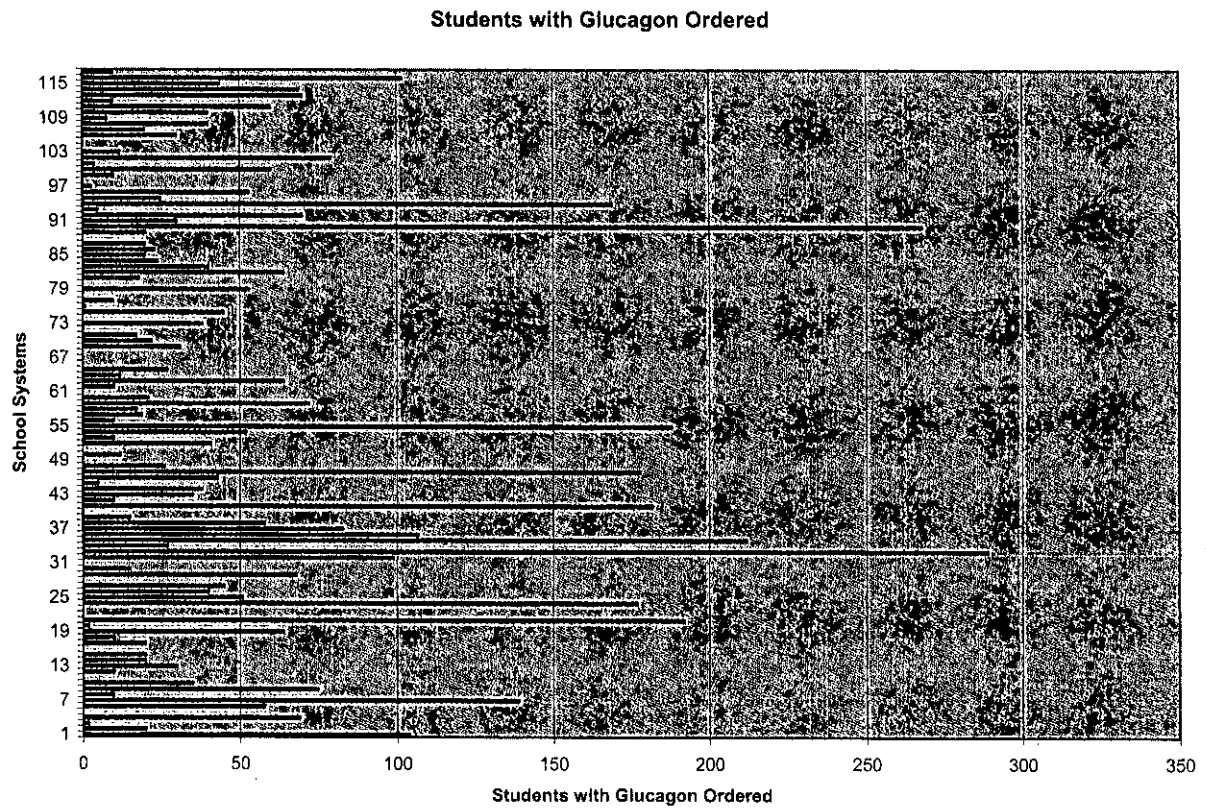
ITEM #12

NUMBER OF BREATHING TREATMENTS PROVIDED



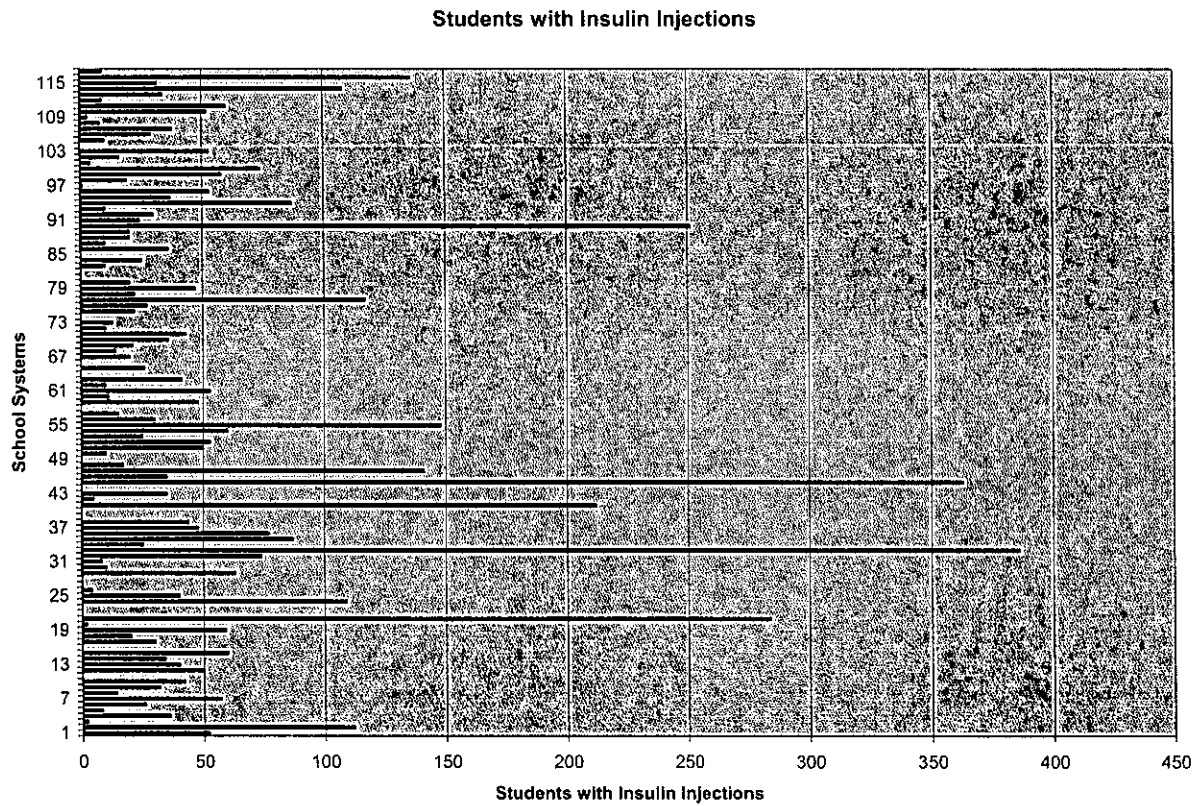
ITEM #13

NUMBER OF STUDENTS WITH GLUCAGON INJECTION ORDERED



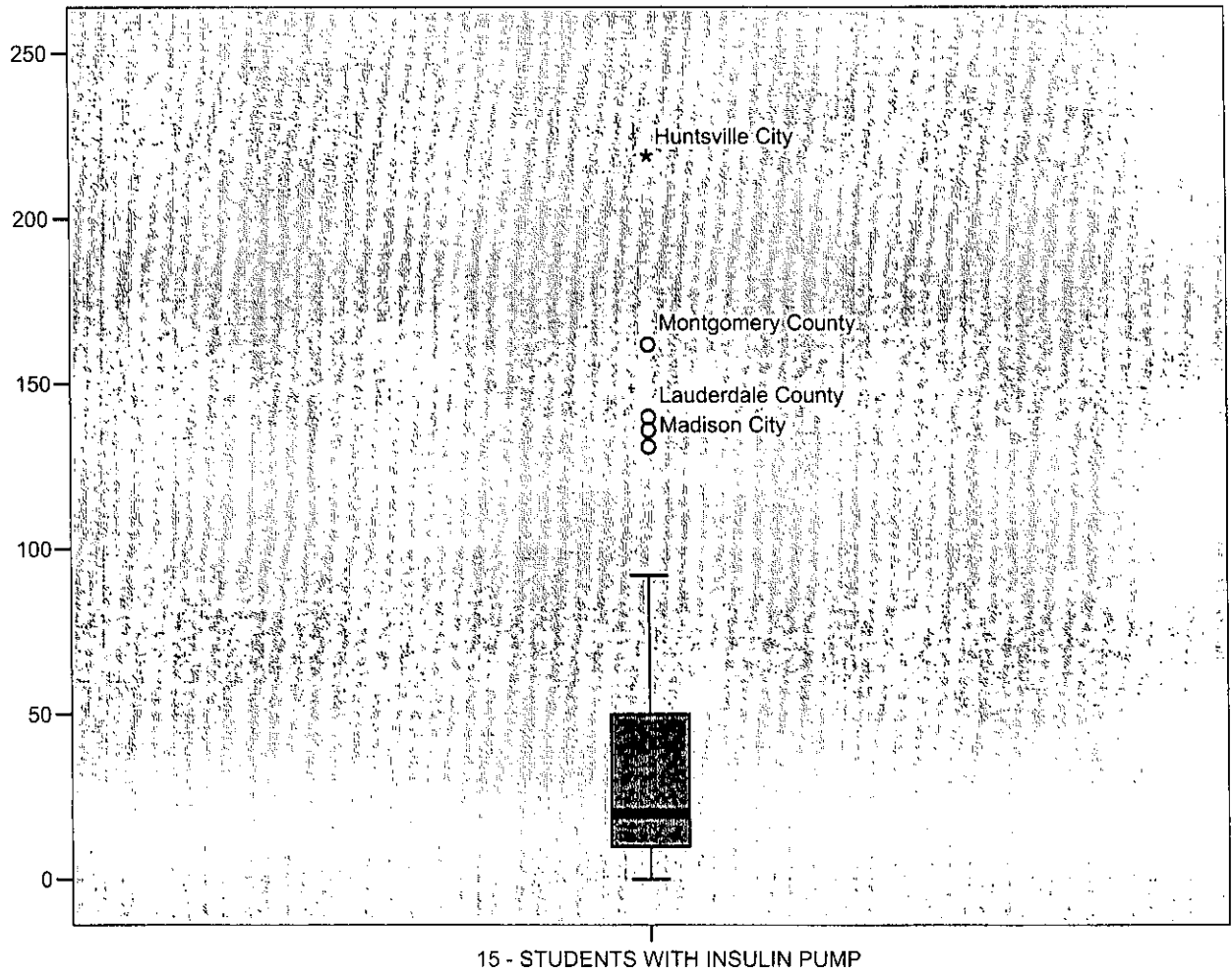
ITEM #14

NUMBER OF STUDENTS WITH INSULIN INJECTIONS ORDERED



ITEM #15

NUMBER OF STUDENTS WITH INSULIN PUMP

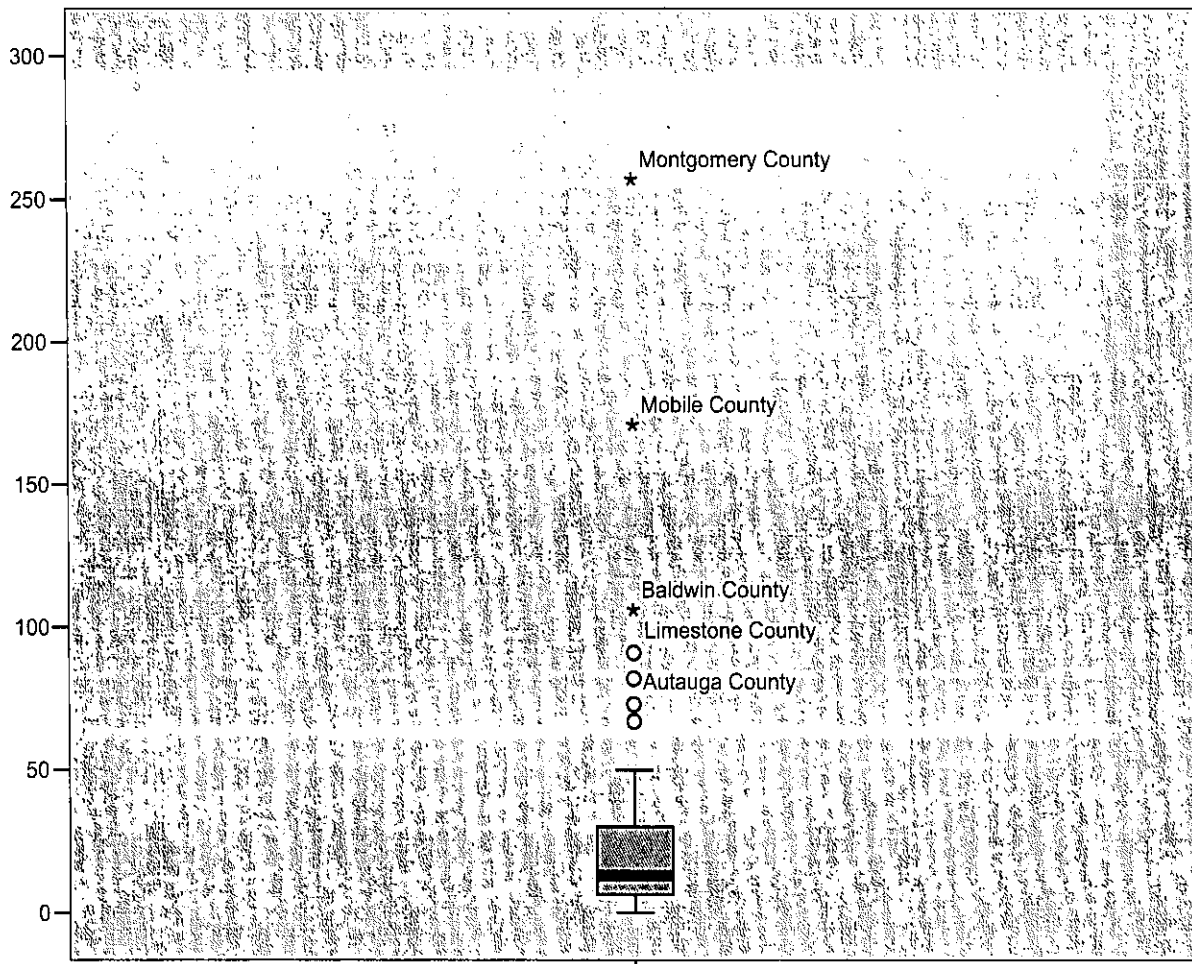


Note: The box plot chart illustrates geographical outliers for numbers of students with insulin pumps within the state.

- o Outlier
- * Extreme Outlier

ITEM #16

NUMBER OF STUDENTS WITH DIASTAT SUPPOSITORY ORDERED



16 - STUDENTS WITH DIASTAT SUPPOSITORY ORDERED PRN

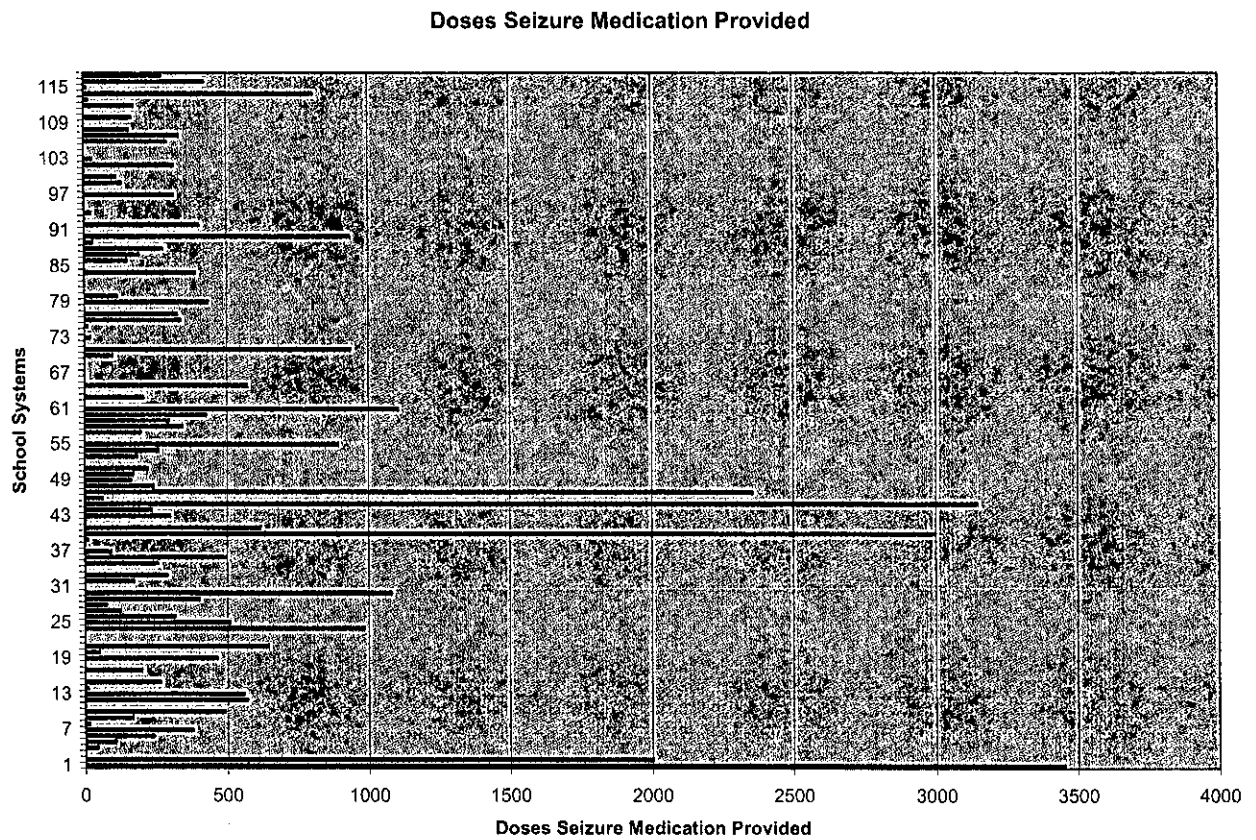
Note: The box plot chart illustrates geographical outliers for numbers of students with orders for Diastat® Suppository in the state.

o Outlier

* Extreme Outlier

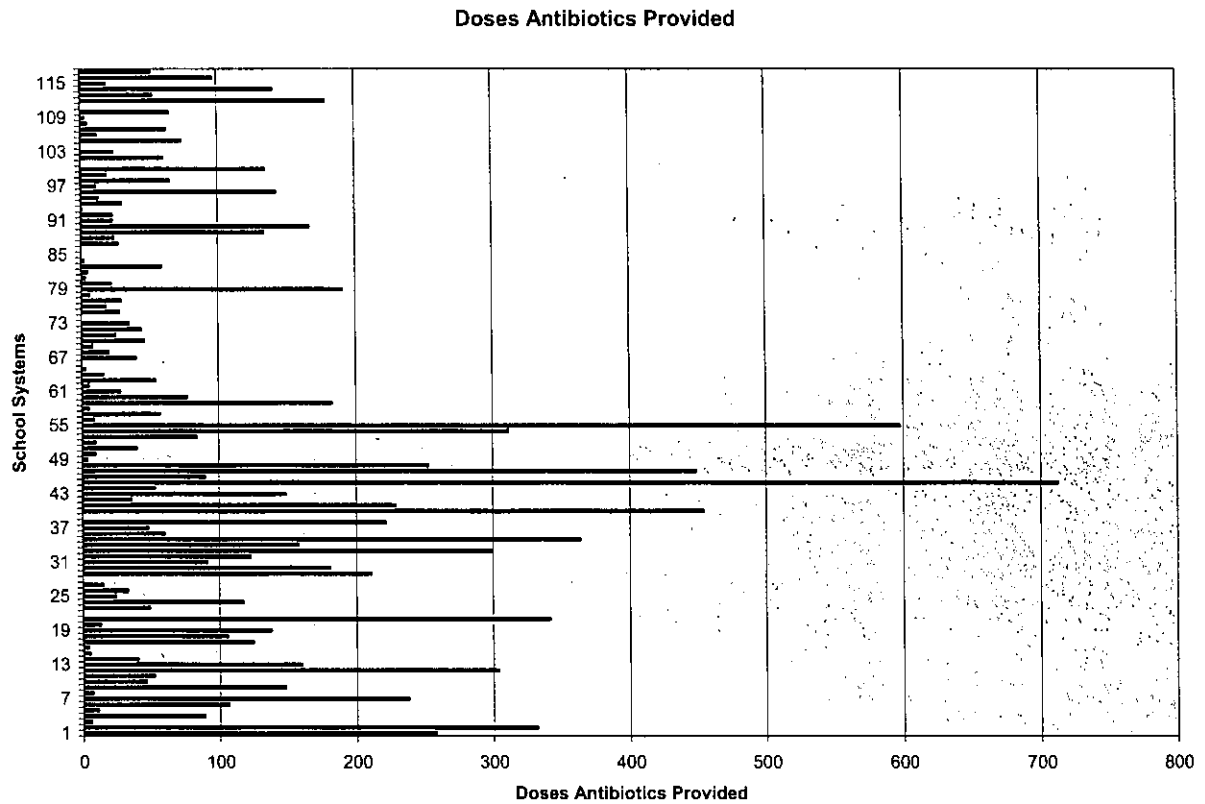
ITEM #17

NUMBER OF DOSES OF SEIZURE MEDICATION PROVIDED



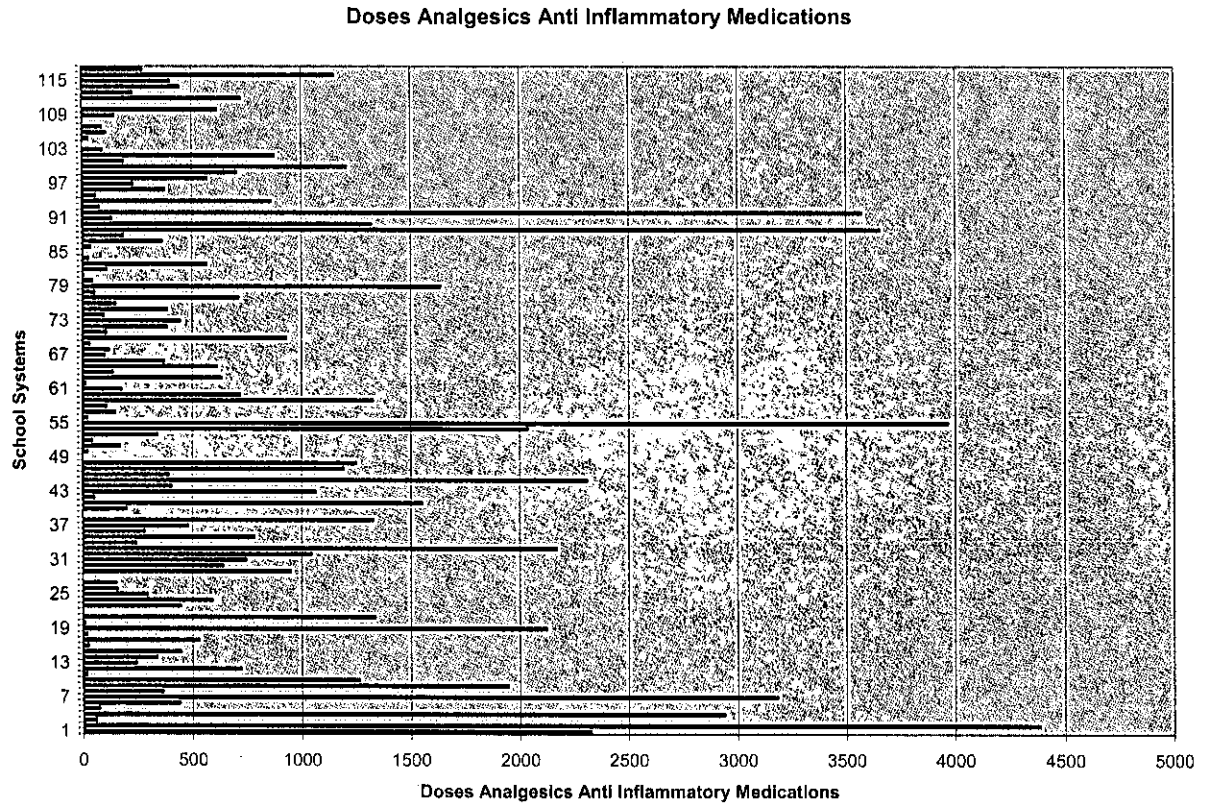
ITEM #18

NUMBER OF DOSES OF ANTIBIOTICS PROVIDED



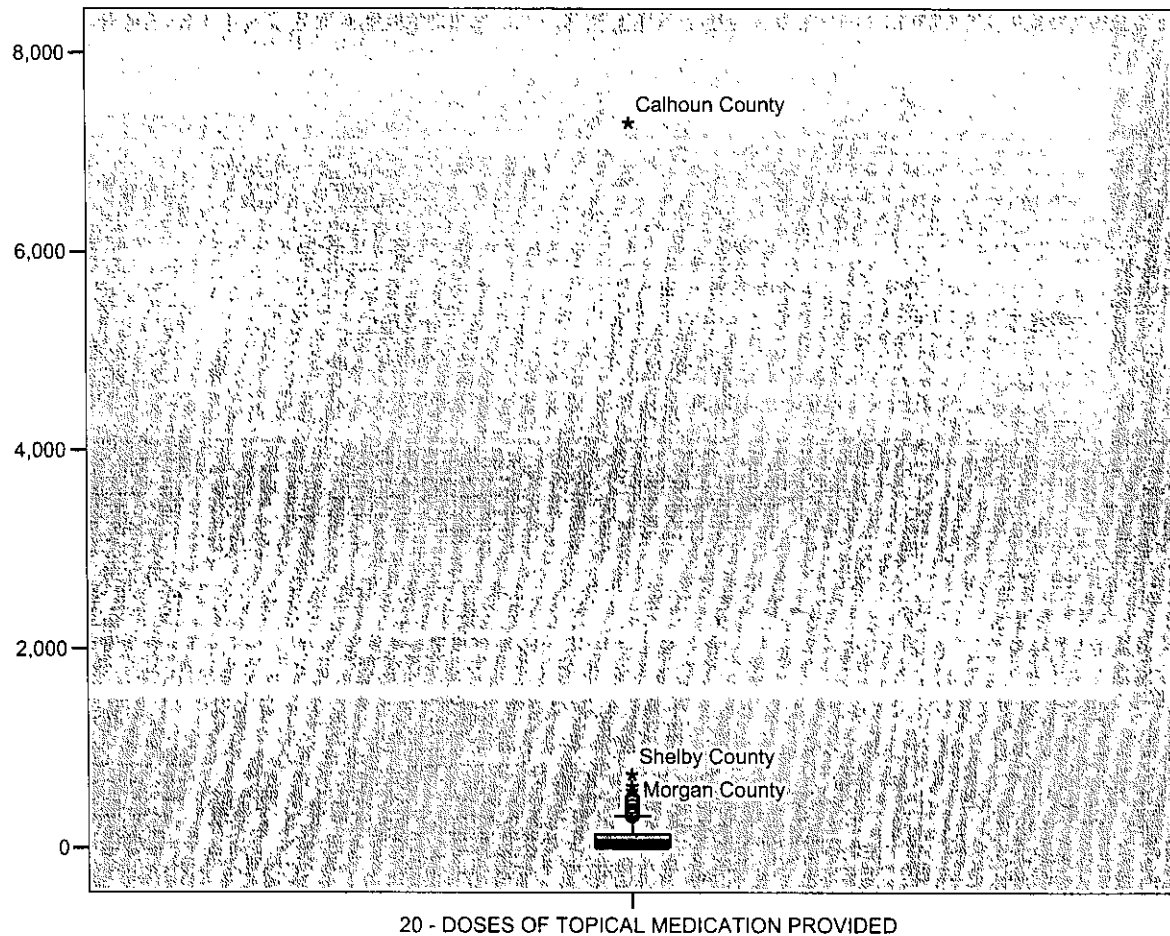
ITEM #19

NUMBER OF DOSES OF ANALGESICS/ANTI-INFLAMMATORY PROVIDED



ITEM #20

NUMBER OF DOSES OF TOPICAL MEDICATION PROVIDED

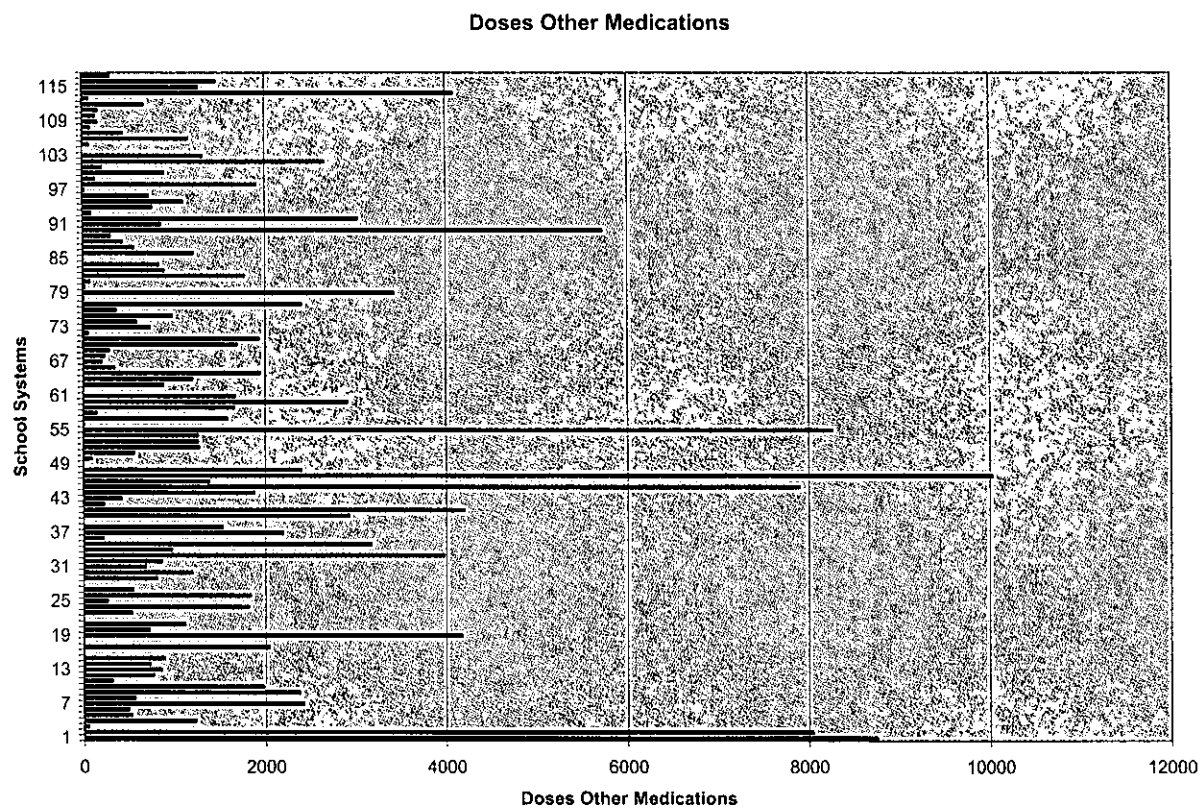


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

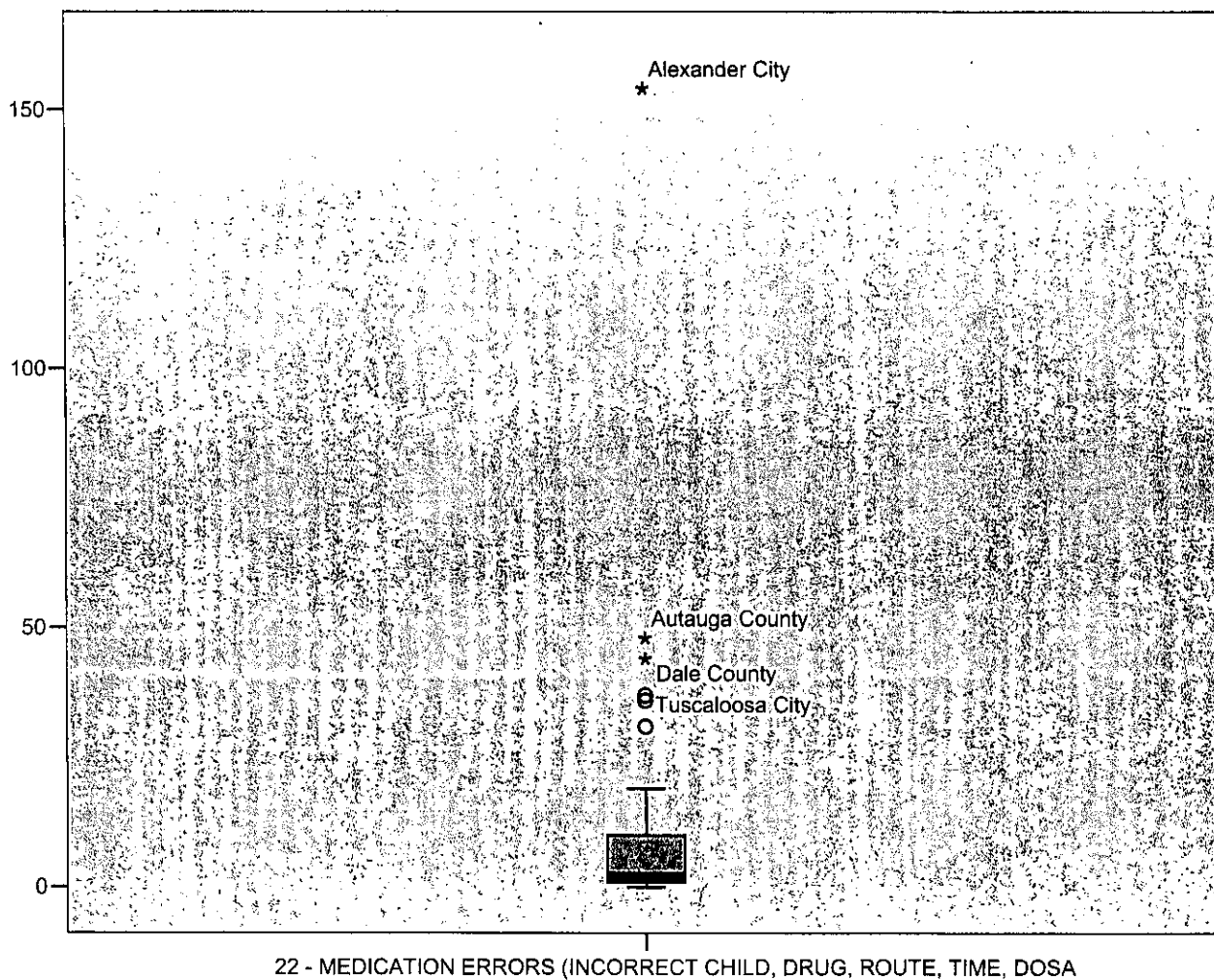
ITEM #21

NUMBER OF DOSES OF OTHER MEDICATIONS PROVIDED



ITEM #22

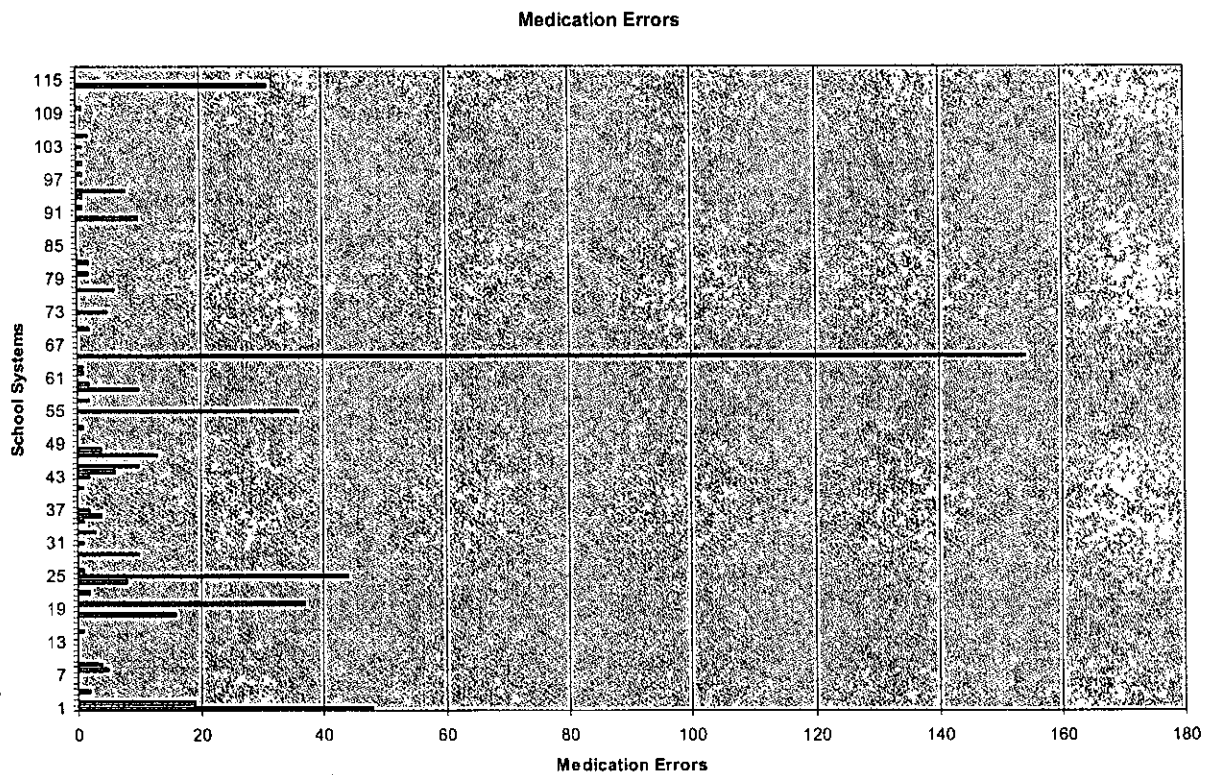
NUMBER OF MEDICATION ERRORS



Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

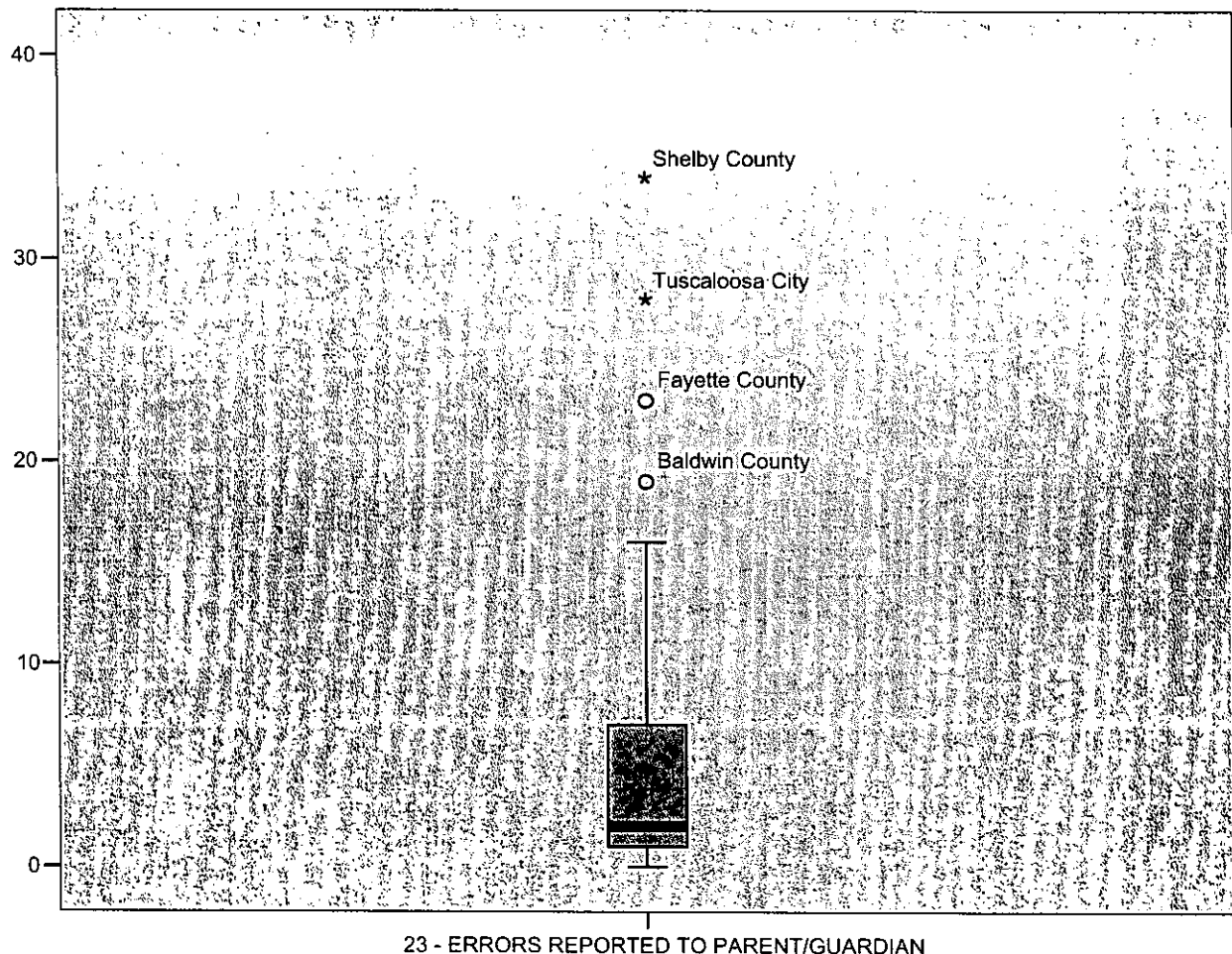
- o Outlier
- * Extreme Outlier

ITEM #22
NUMBER OF MEDICATION ERRORS



ITEM #23

NUMBER OF ERRORS REPORTED TO PARENT/GUARDIAN



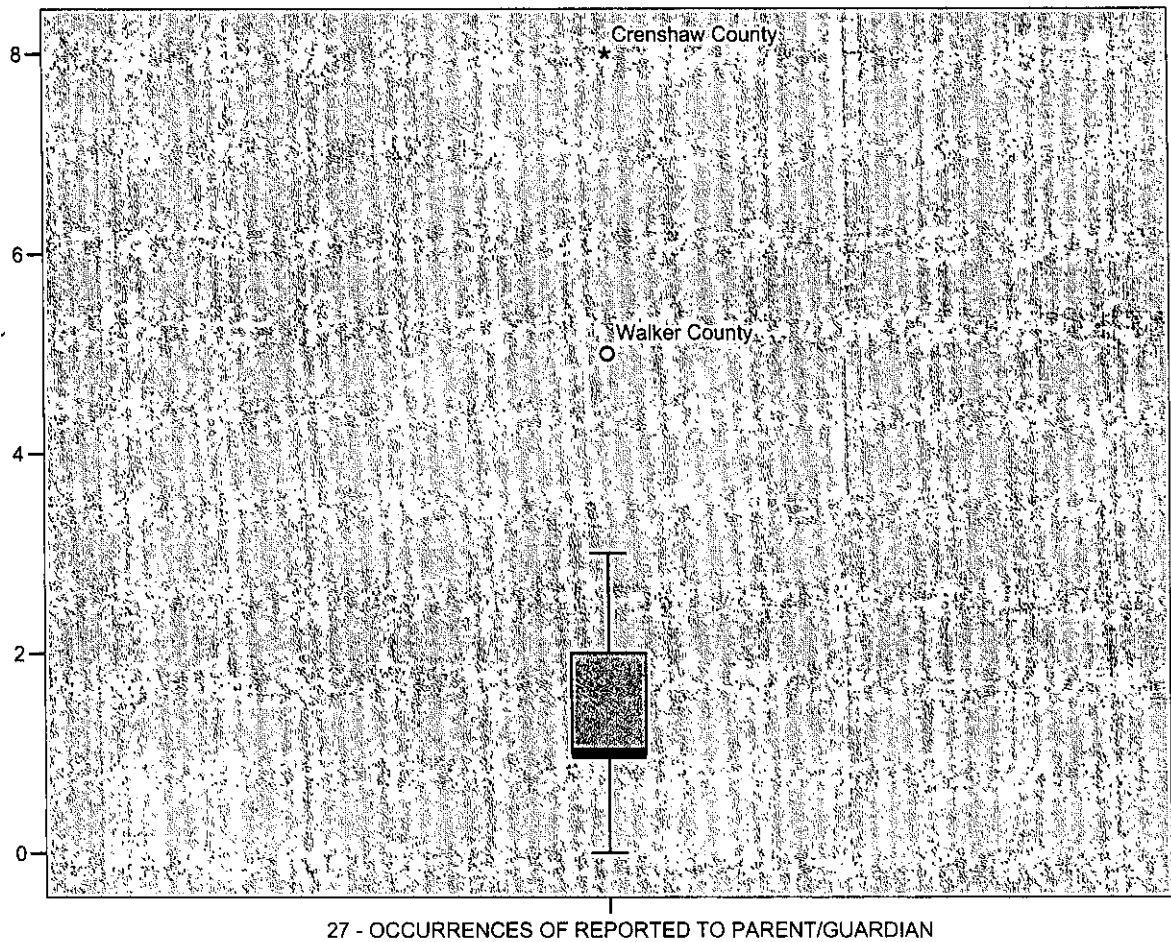
Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

o Outlier

* Extreme Outlier

ITEM #27

NUMBER OF OCCURRENCES OF LOST/STOLEN MEDICATIONS REPORTED TO PARENT/GUARDIAN

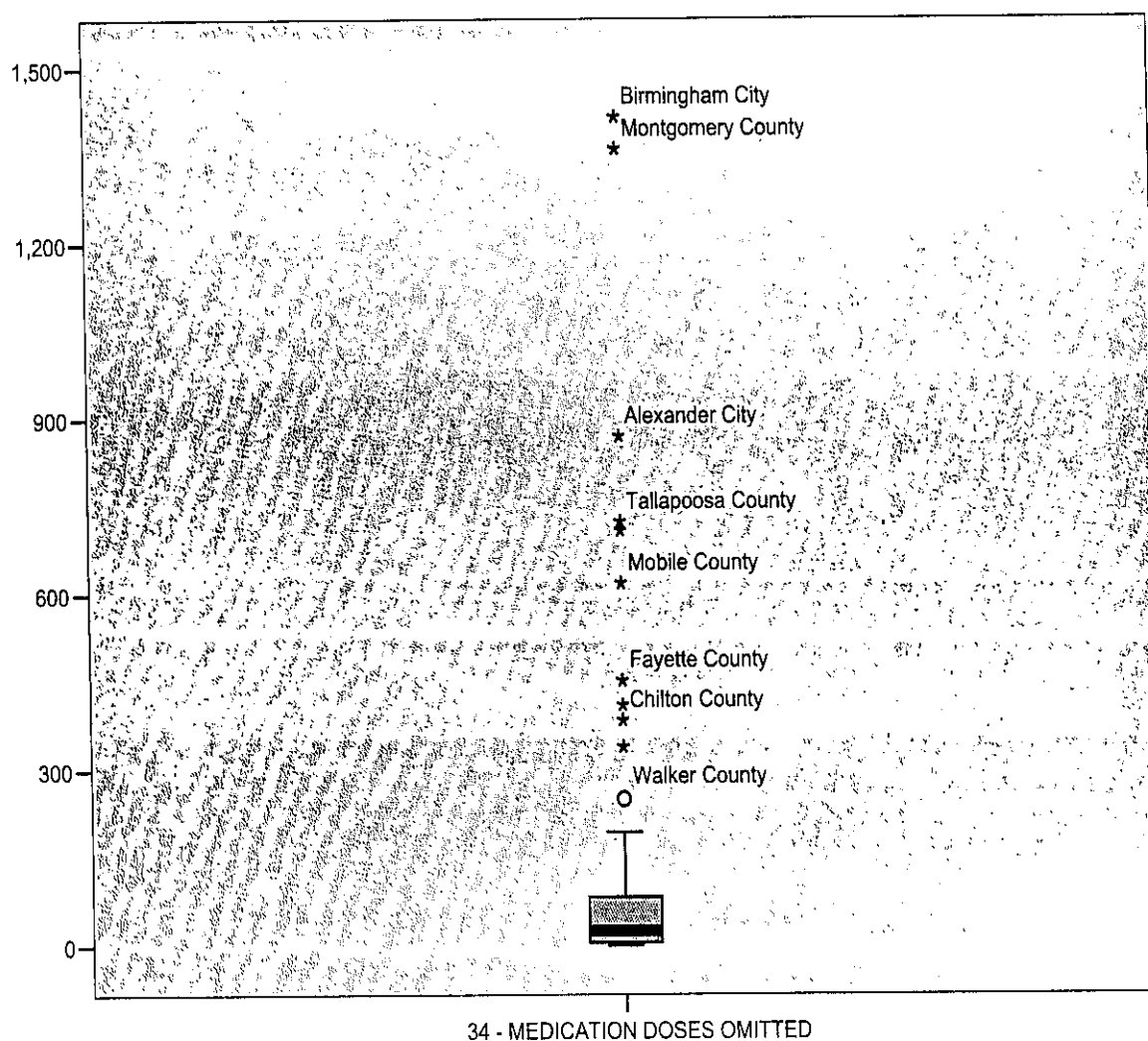


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

ITEM #34

NUMBER OF MEDICATION DOSES OMITTED

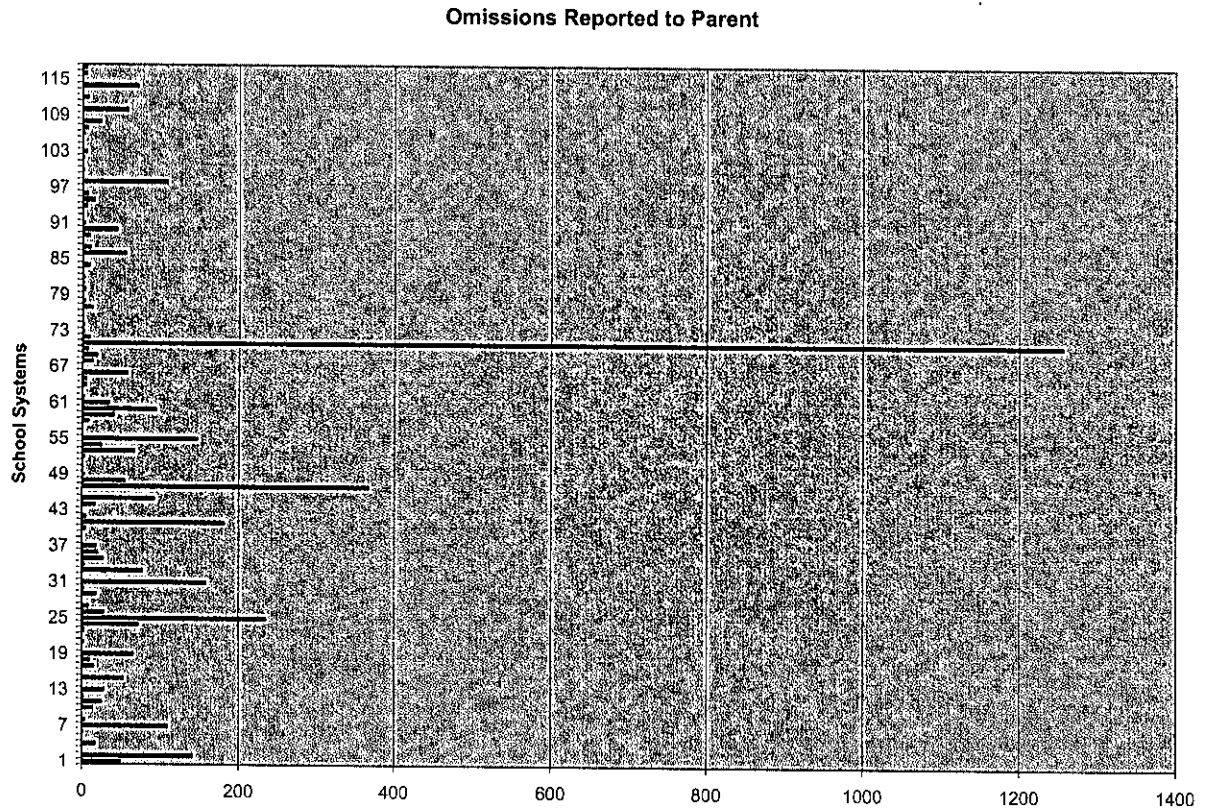


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

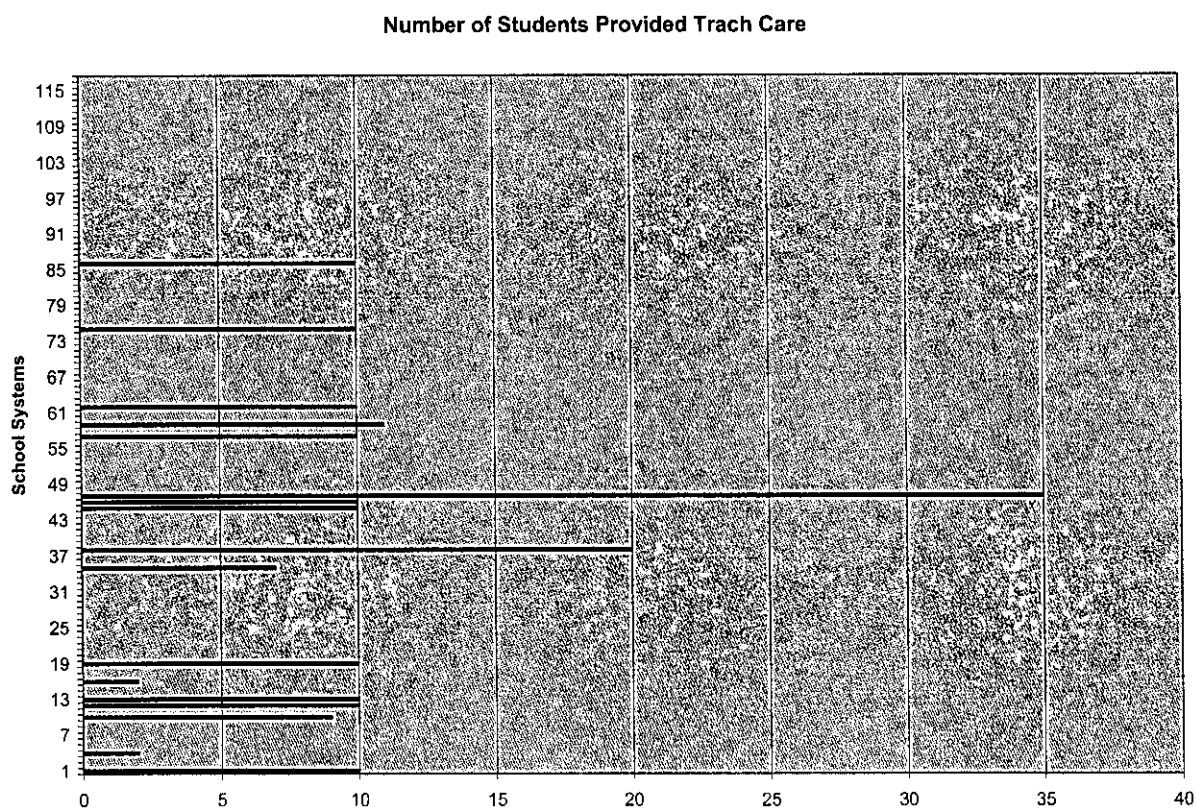
ITEM #35

NUMBER OF OMITTED DOSES REPORTED TO PARENT/GUARDIAN



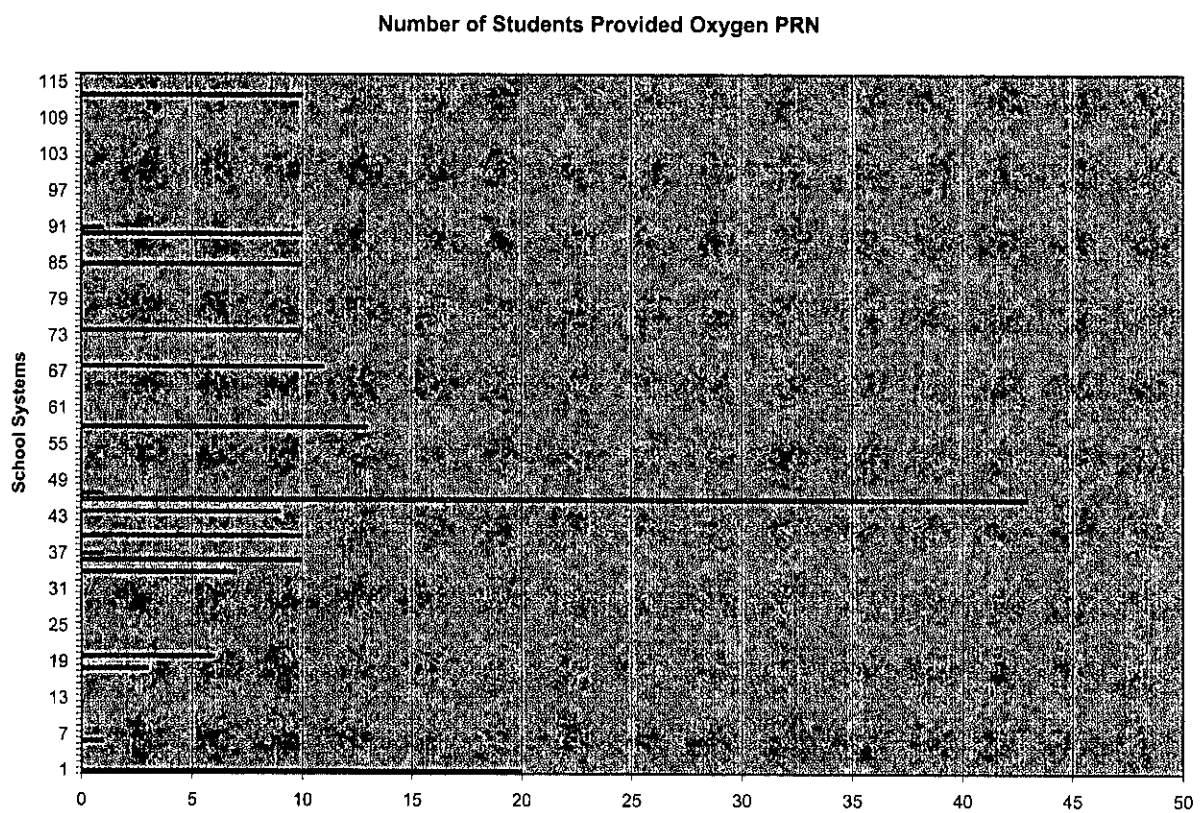
ITEM #39

NUMBER OF STUDENTS PROVIDED TRACH CARE



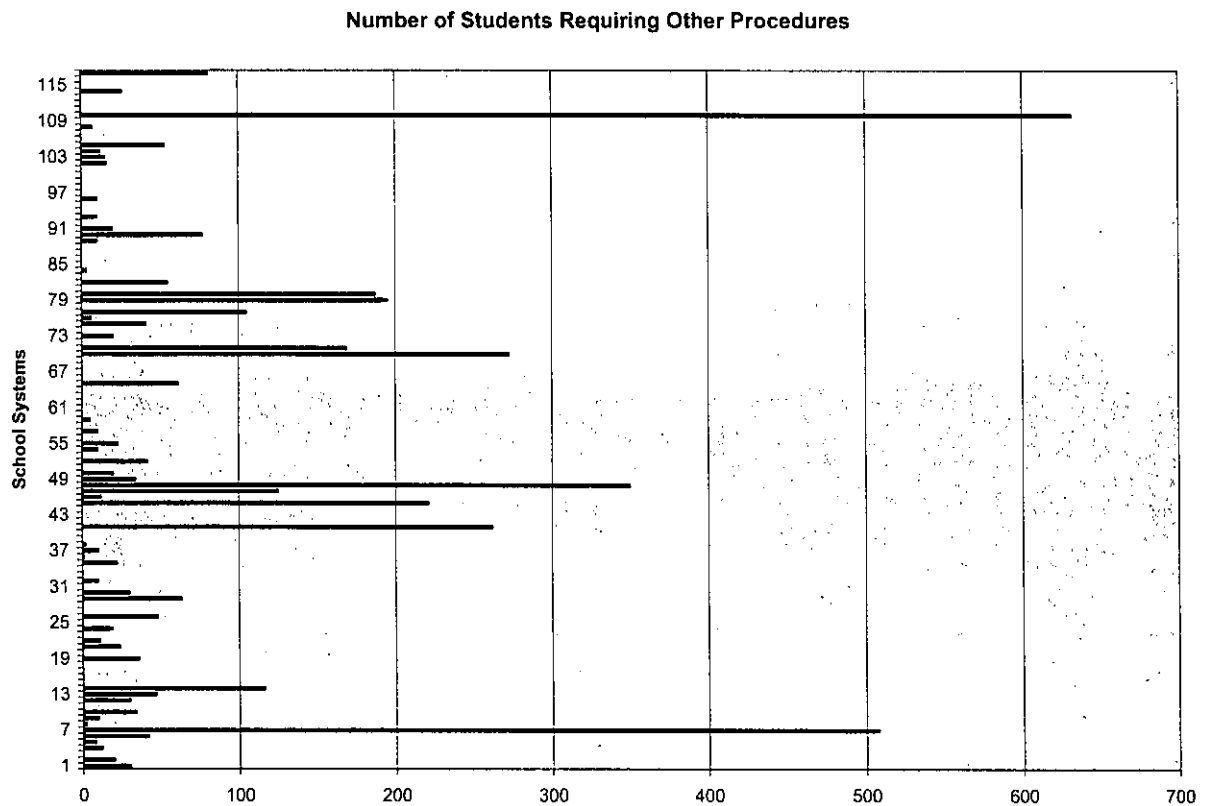
ITEM #40

NUMBER OF STUDENTS PROVIDED OXYGEN PRN

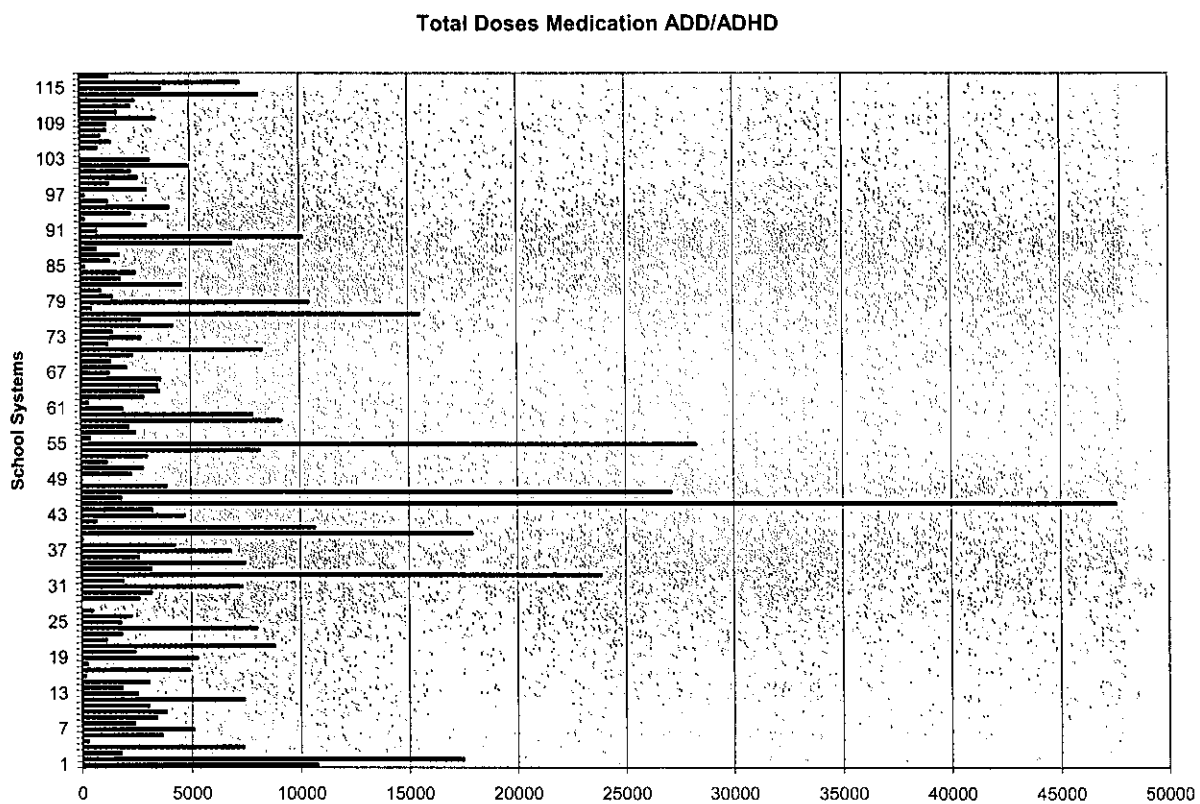


ITEM #42

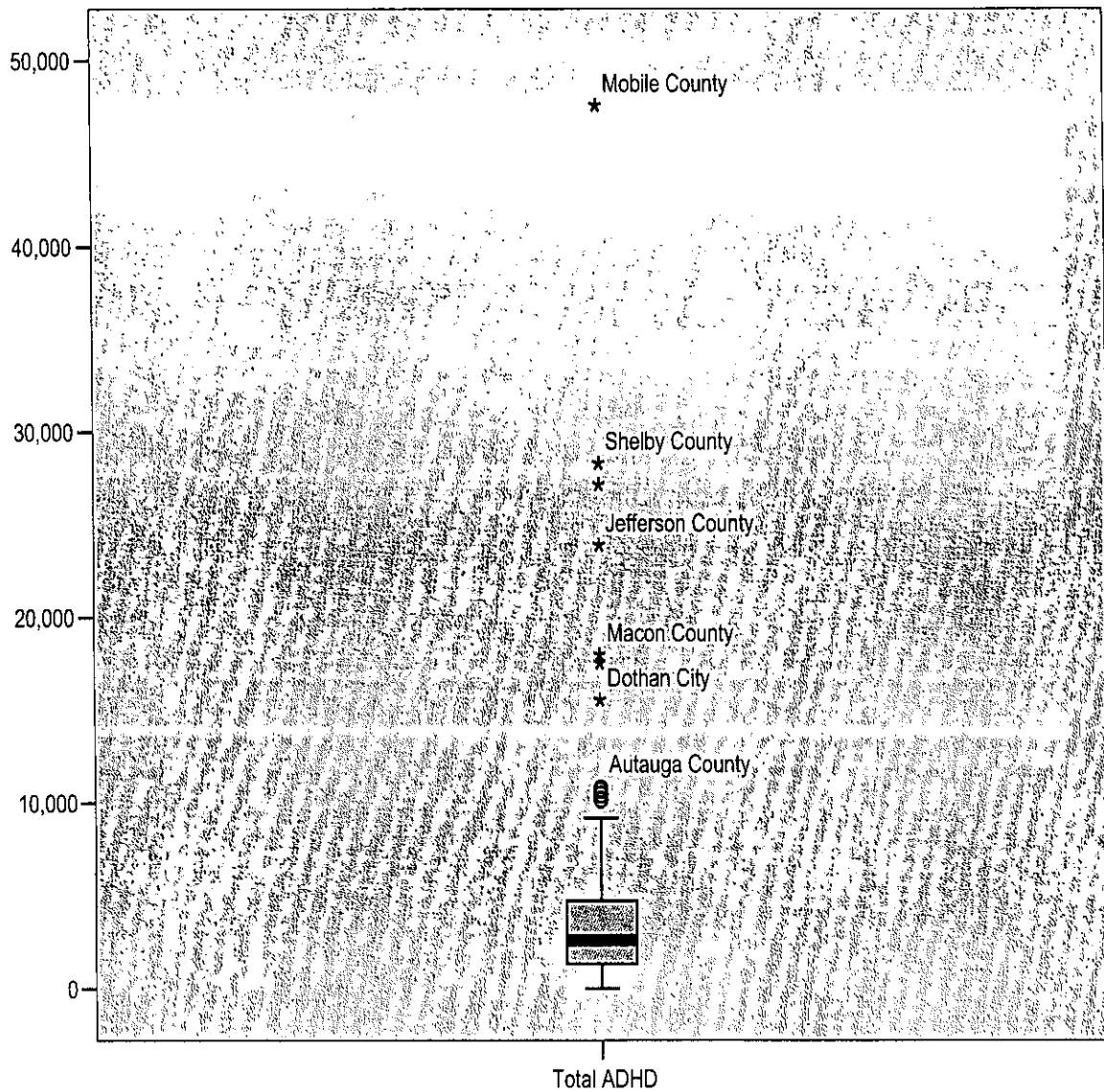
NUMBER OF STUDENTS REQUIRING OTHER PROCEDURES



TOTAL DOSES ADD/ADHD MEDICATIONS

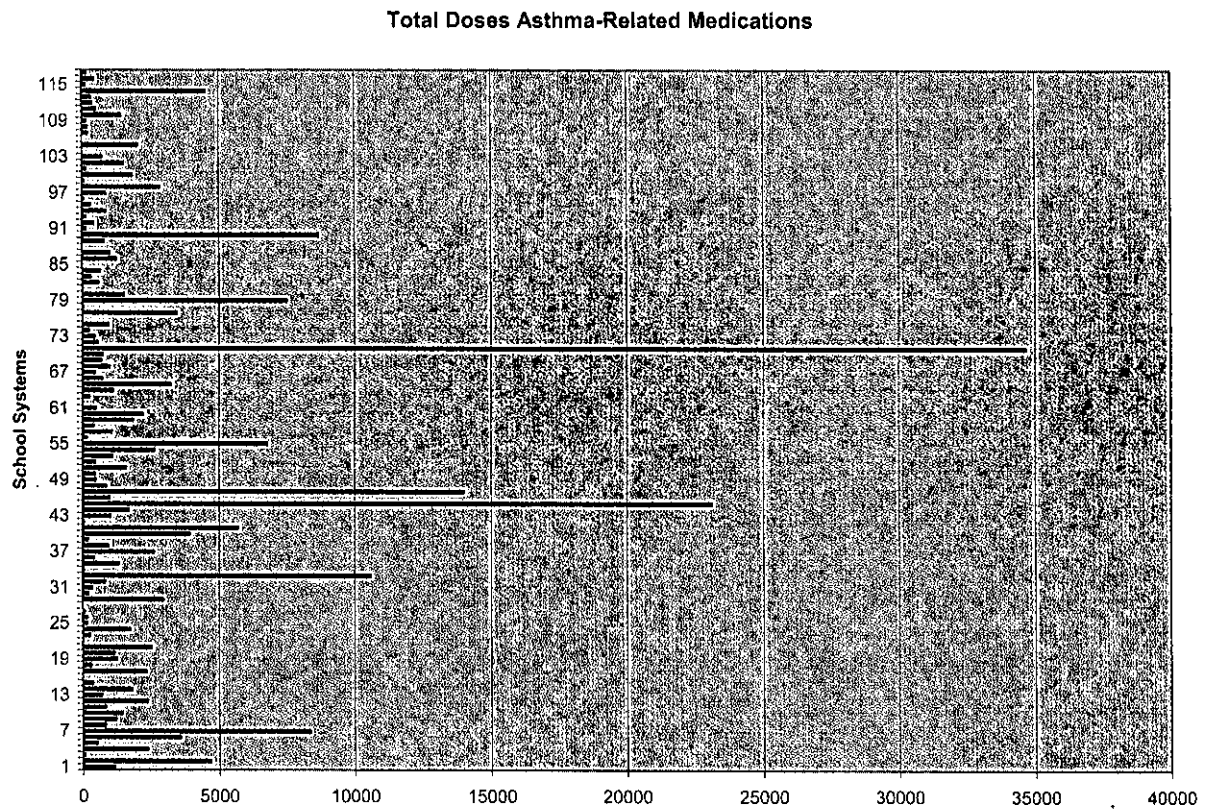


TOTAL DOSES ADD/ADHD MEDICATIONS

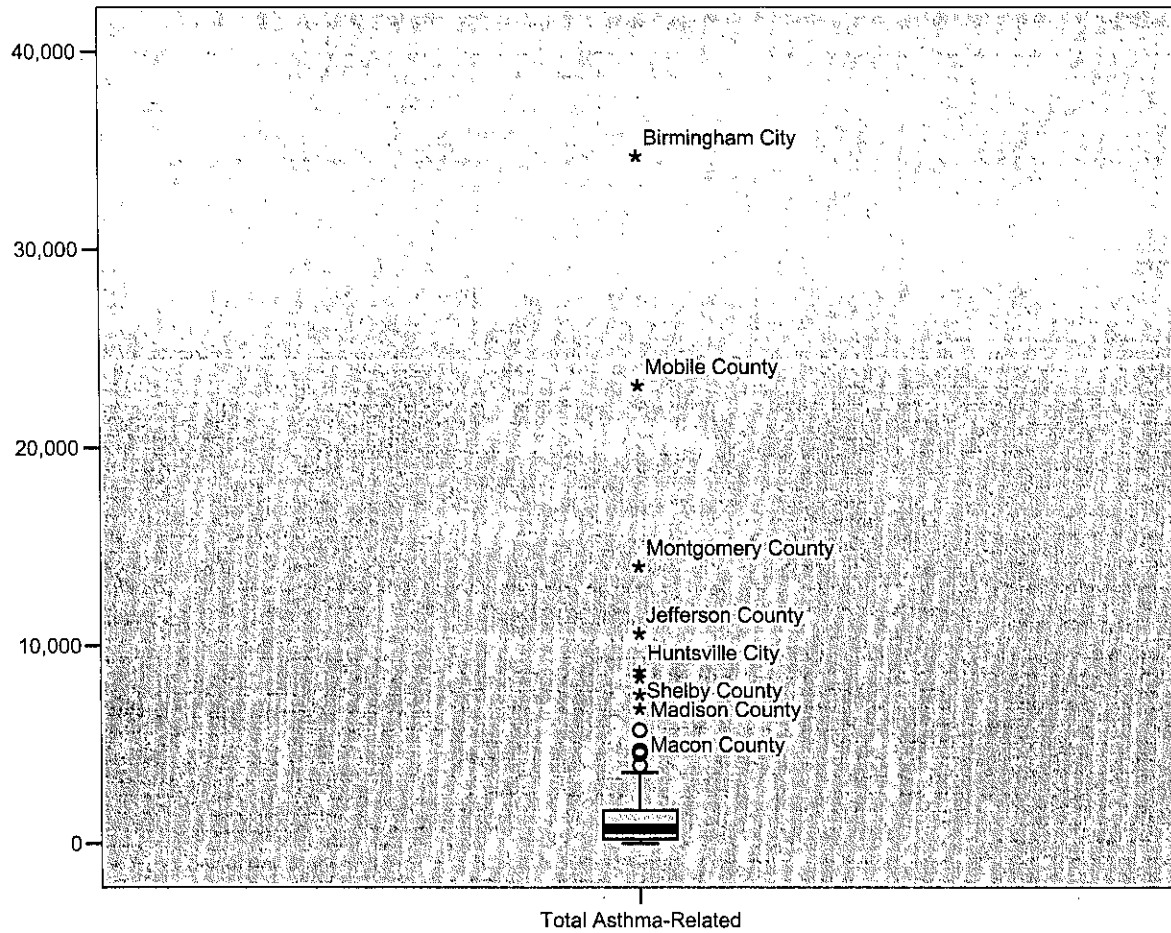


Note: The box plot chart illustrates geographical outliers for numbers of students requiring medications for ADD/ADHD.

TOTAL DOSES ASTHMA-RELATED MEDICATIONS



TOTAL DOSES ASTHMA-RELATED MEDICATIONS



Note: The box plot chart illustrates geographical outliers for numbers of students requiring asthma-related medications

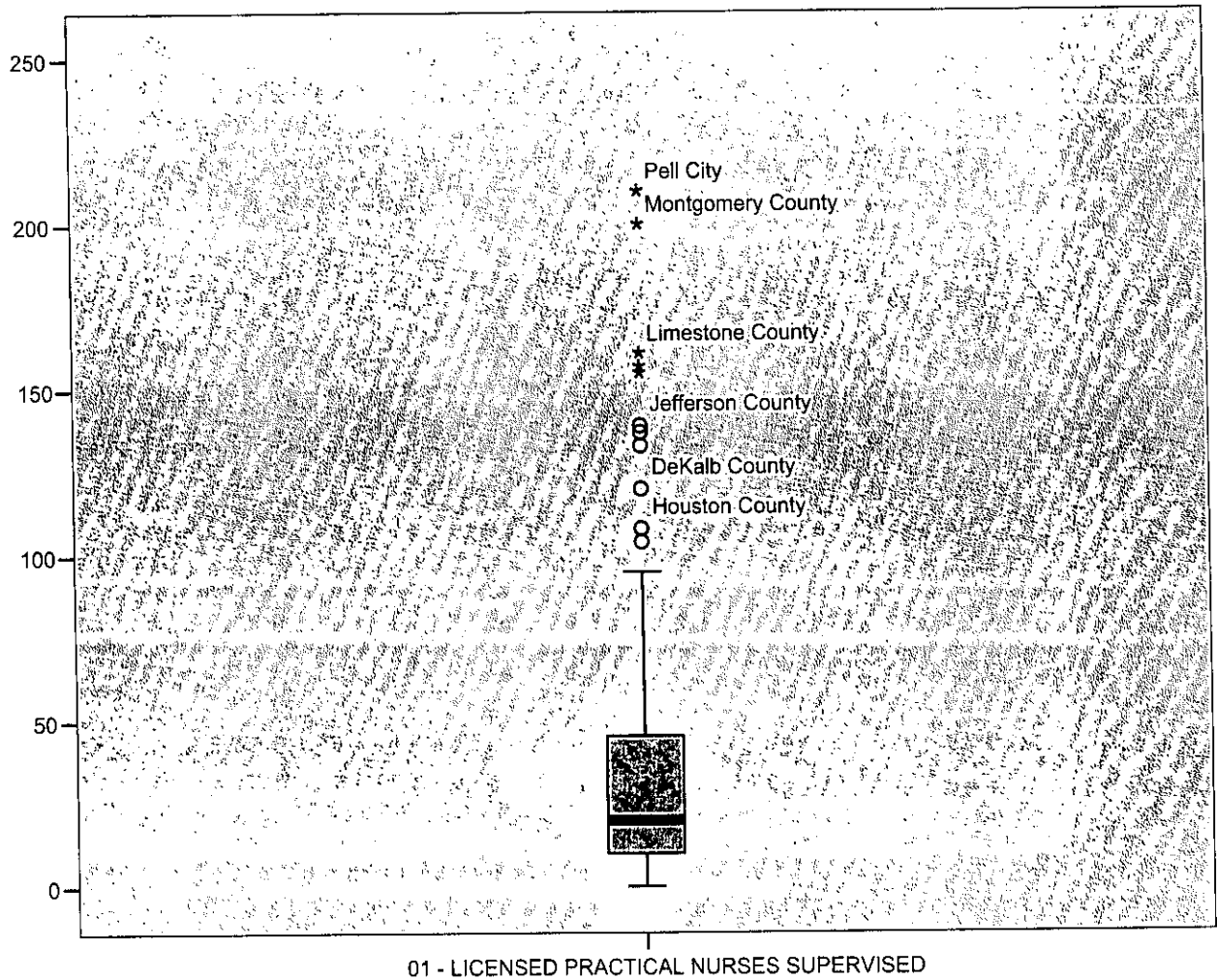
o Outlier

* Extreme Outlier

APPENDIX D
QUESTIONABLE DATA

ITEM #1

NUMBER OF LPNs SUPERVISED

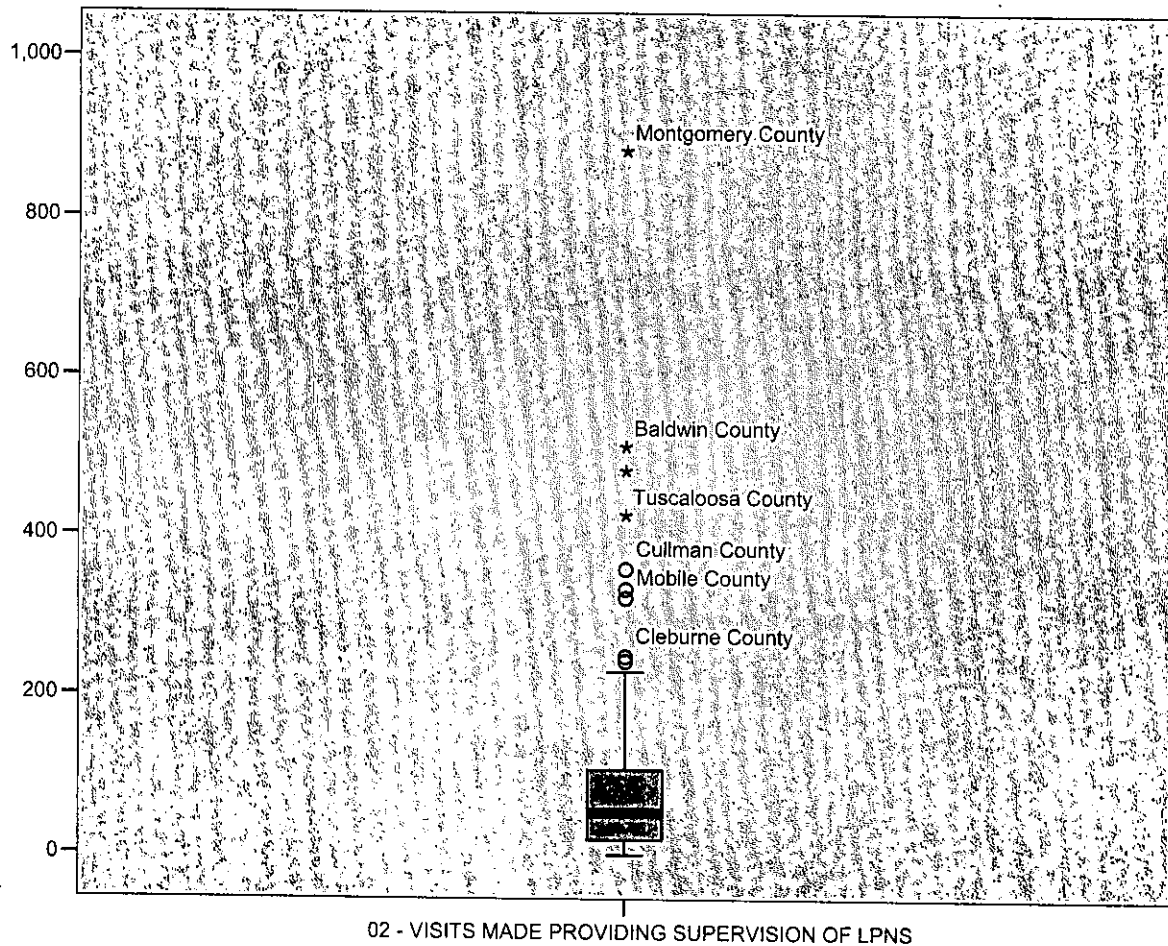


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

ITEM #2

NUMBER OF VISITS MADE PROVIDING SUPERVISION OF LPNS

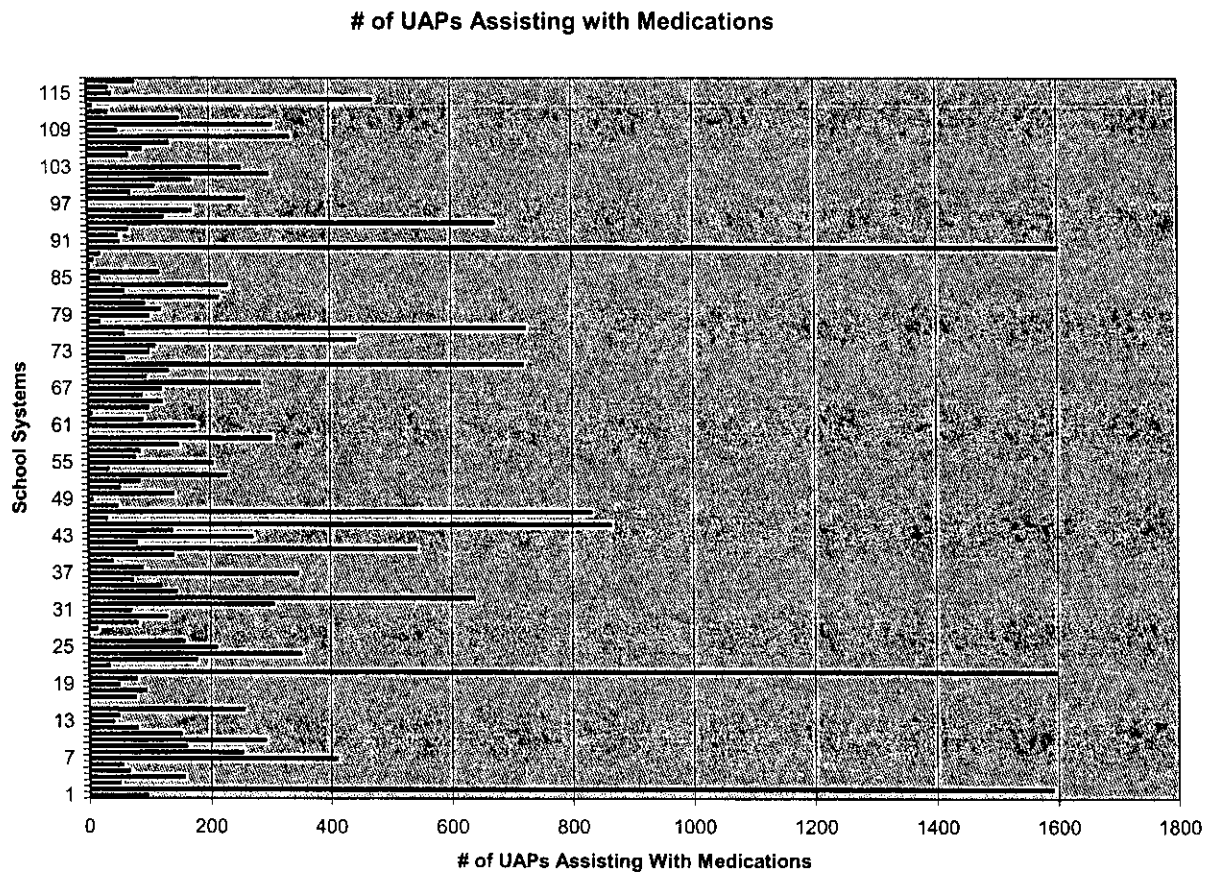


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

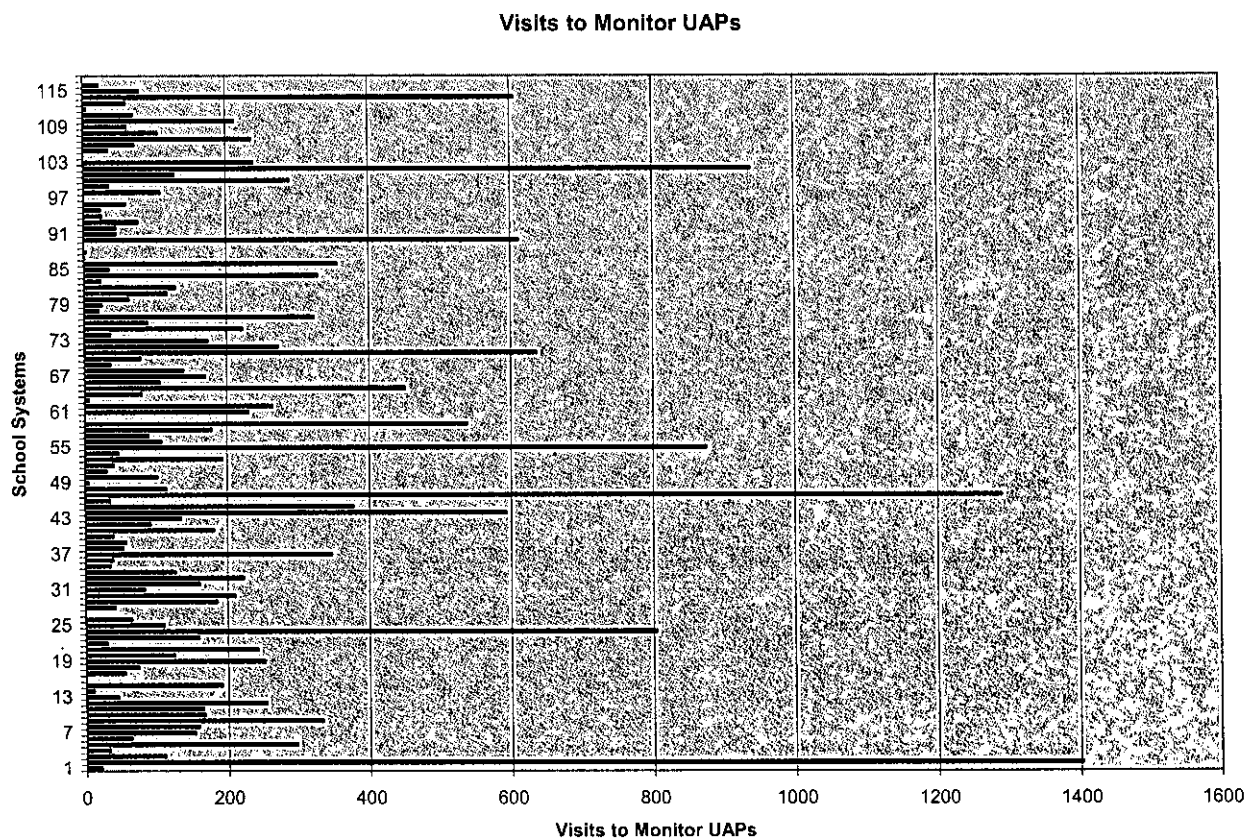
ITEM # 3

NUMBER OF UAP ASSISTING WITH MEDICATIONS



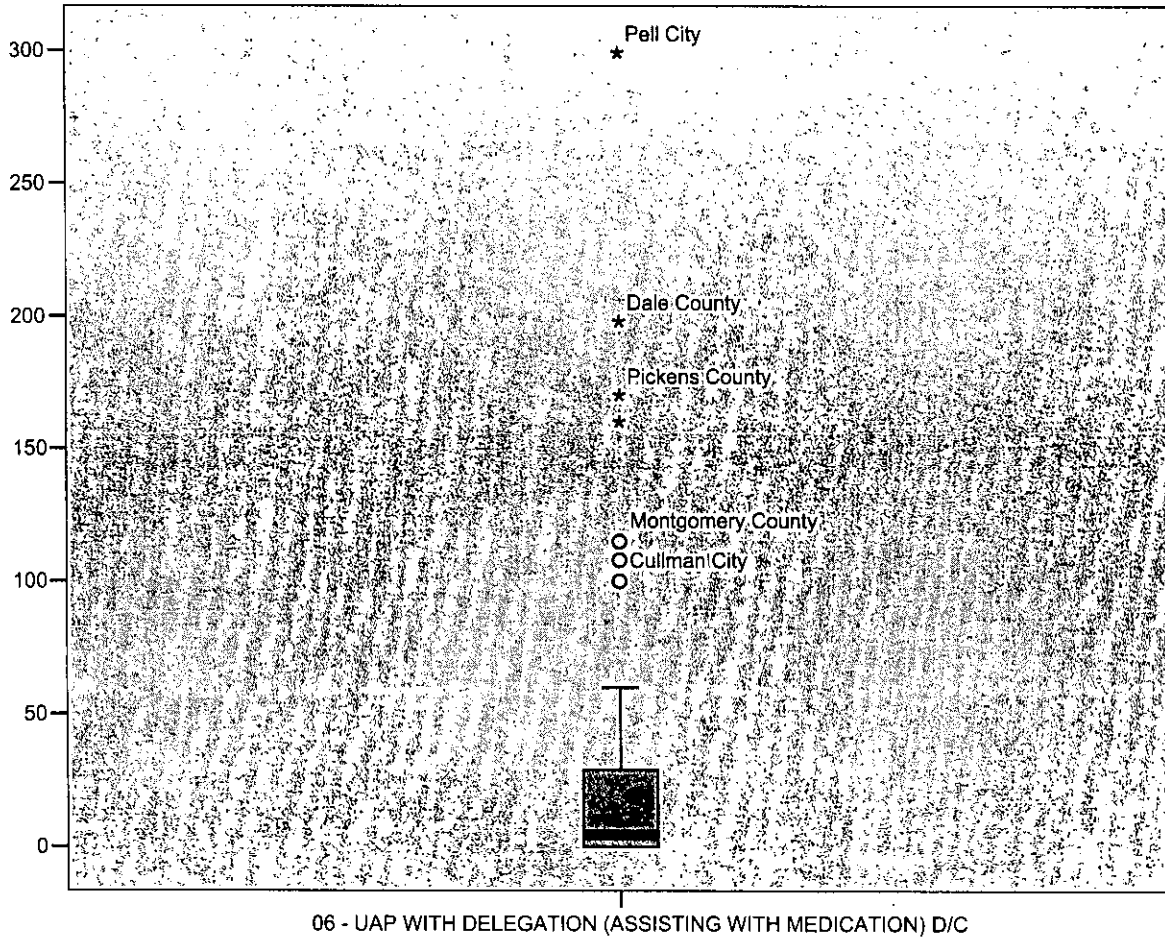
ITEM #4

NUMBER OF UAP MONITORING VISITS MADE



ITEM #6

NUMBER OF UAPs WITH DELEGATION TASK DISCONTINUED BY LICENSED NURSE

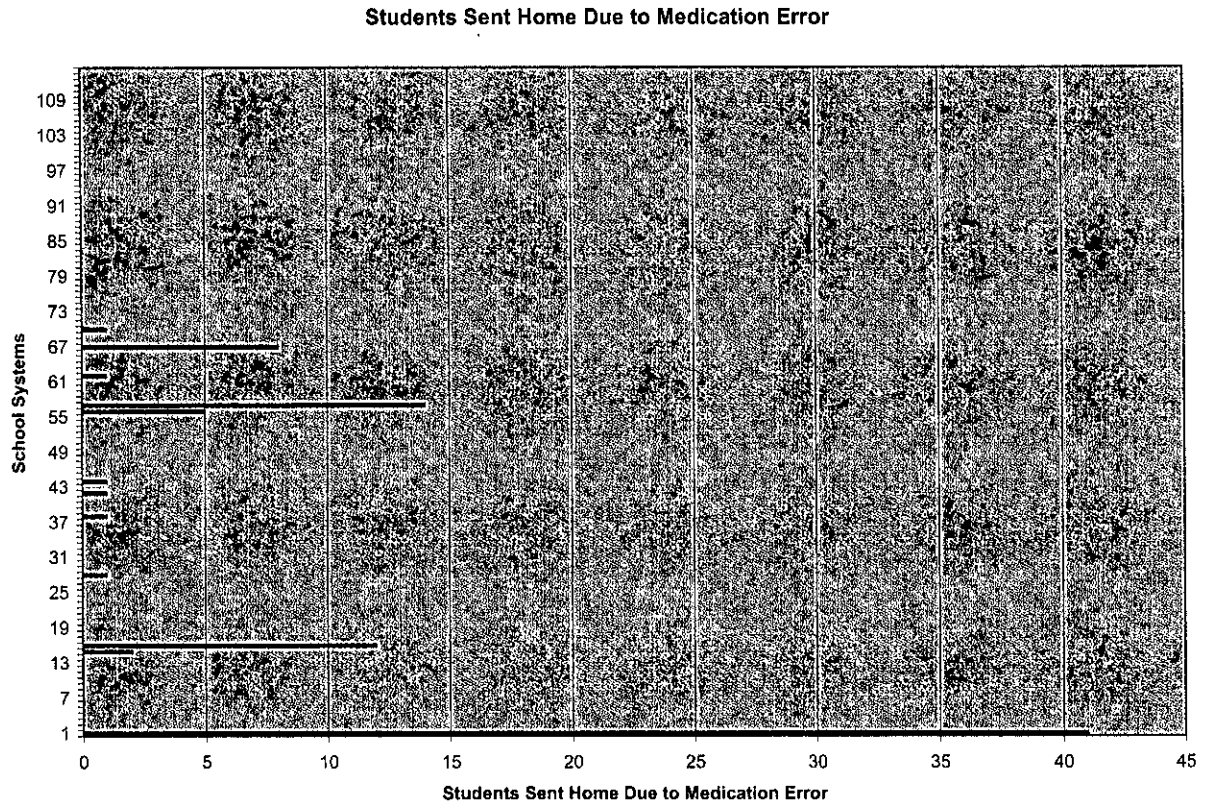


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

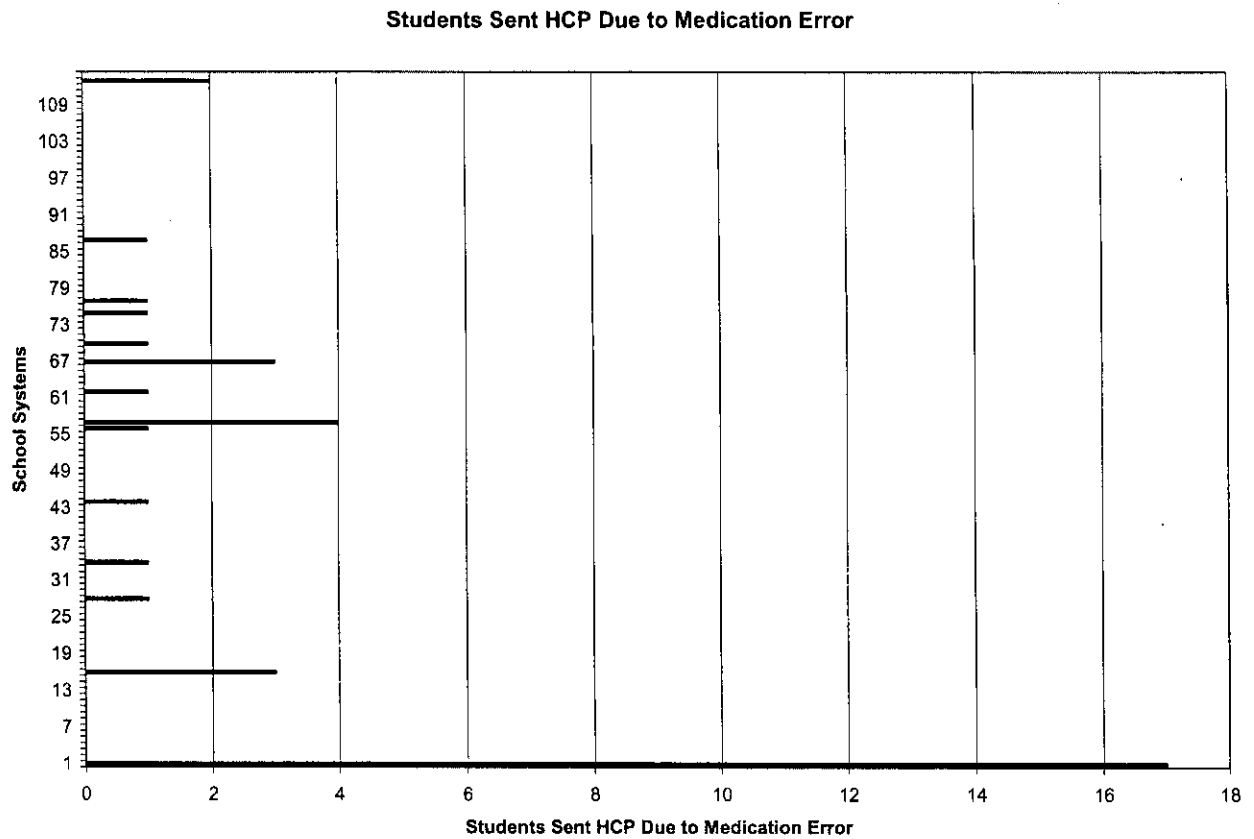
ITEM #24

NUMBER OF STUDENTS SENT HOME TO PARENT/GUARDIAN DUE TO MEDICATION ERROR



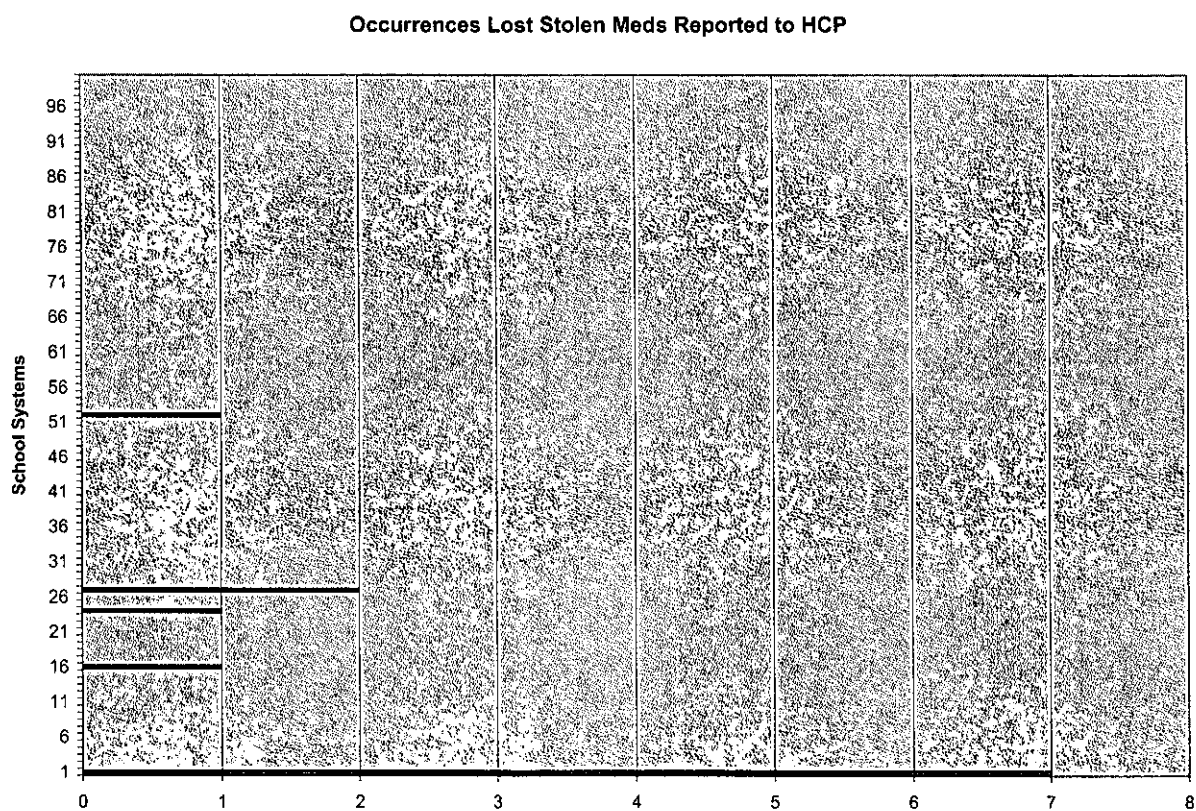
ITEM #25

NUMBER OF STUDENTS SENT TO HEALTH CARE PROVIDER DUE TO MEDICATION ERROR



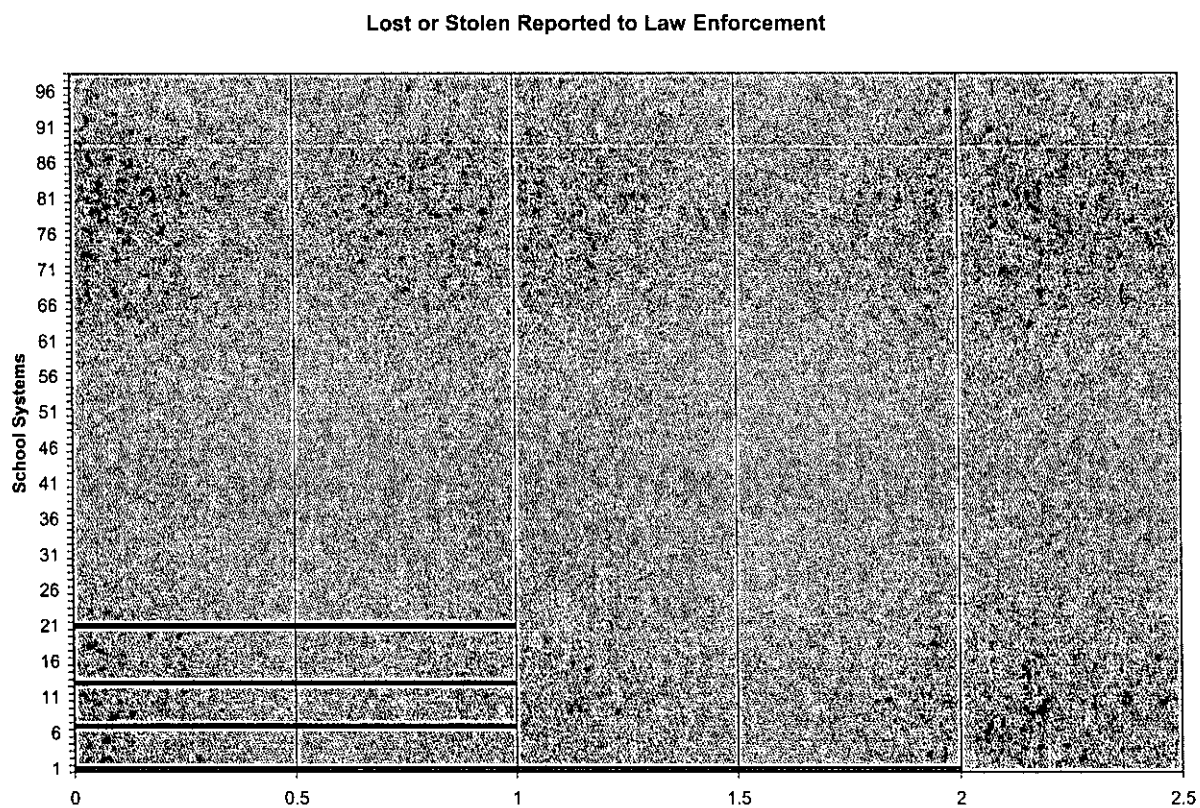
ITEM #28

NUMBER OF OCCURRENCES LOST/STOLEN MEDICATIONS REPORTED TO HEALTH CARE PROVIDER



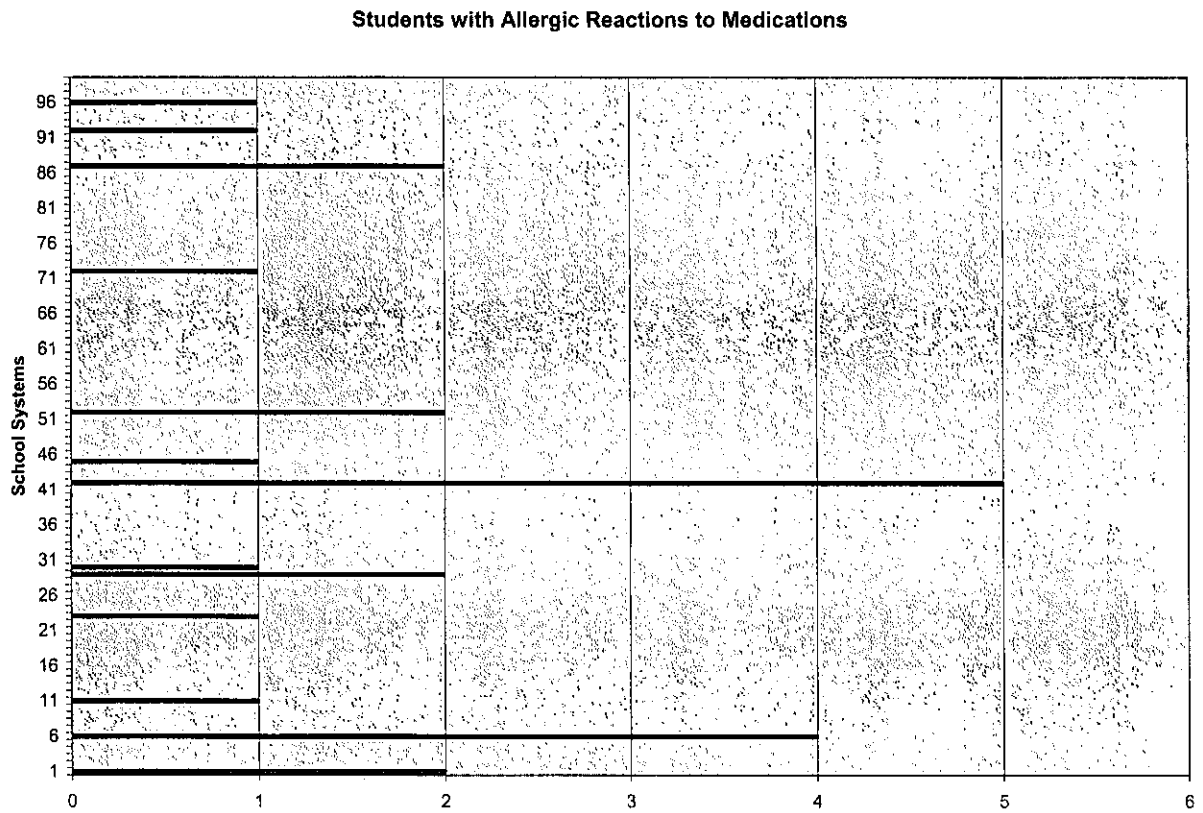
ITEM #29

NUMBER OF OCCURRENCES LOST/STOLEN MEDICATIONS REPORTED TO LAW ENFORCEMENT



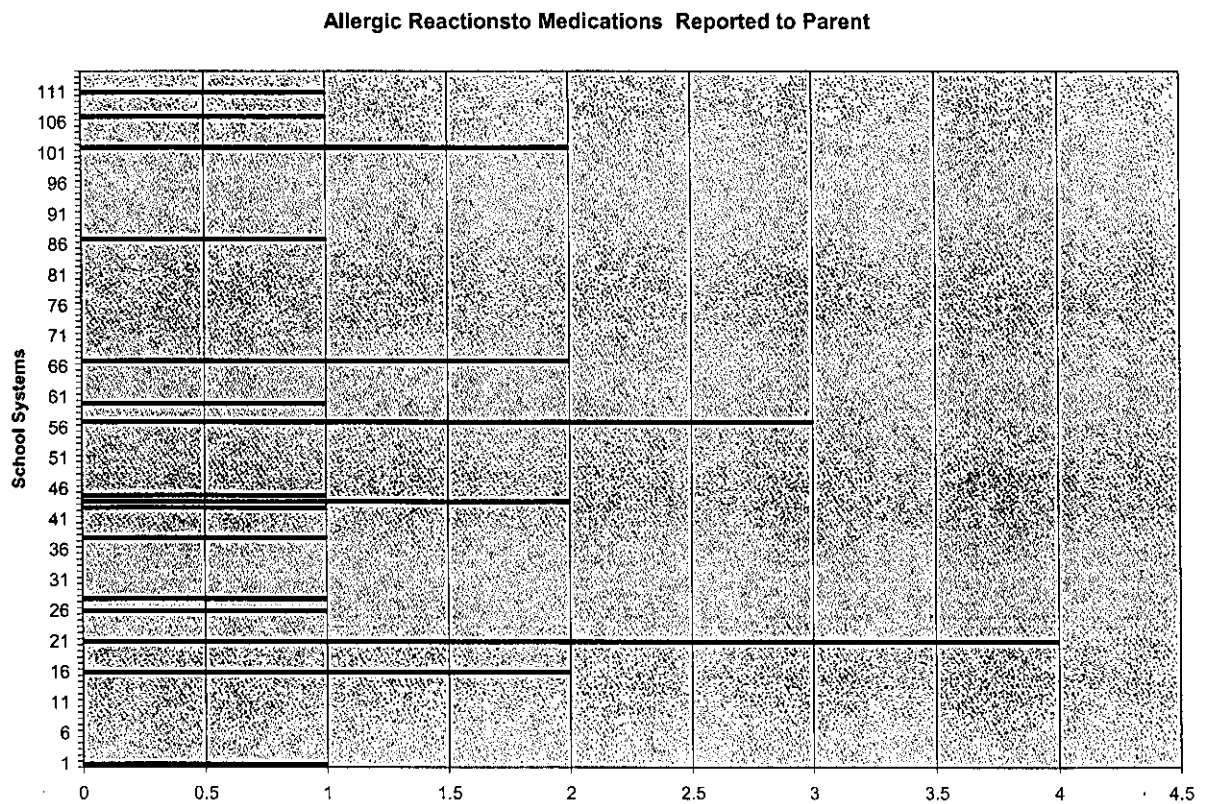
ITEM #30

NUMBER OF STUDENTS WITH ALLERGIC REACTIONS TO MEDICATION



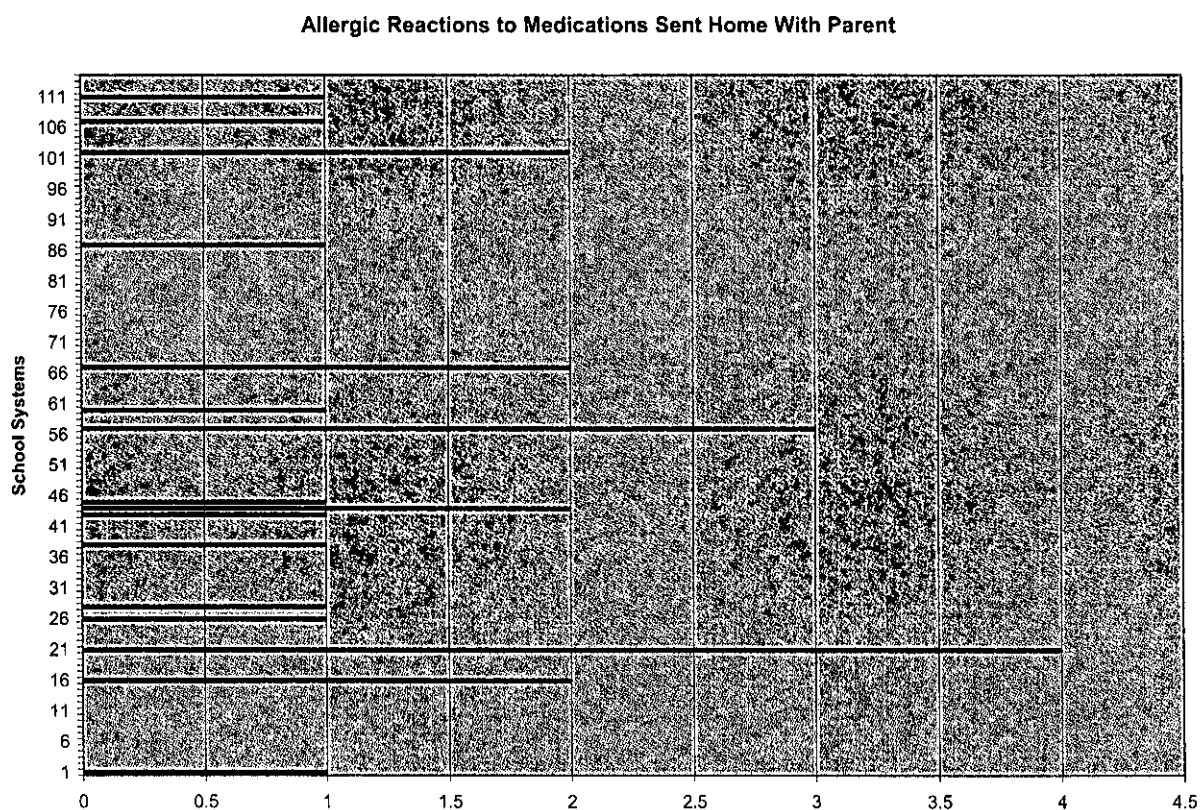
ITEM #31

**NUMBER OF STUDENTS WITH ALLERGIC REACTIONS TO MEDICATION REPORTED TO
PARENT/GUARDIAN**



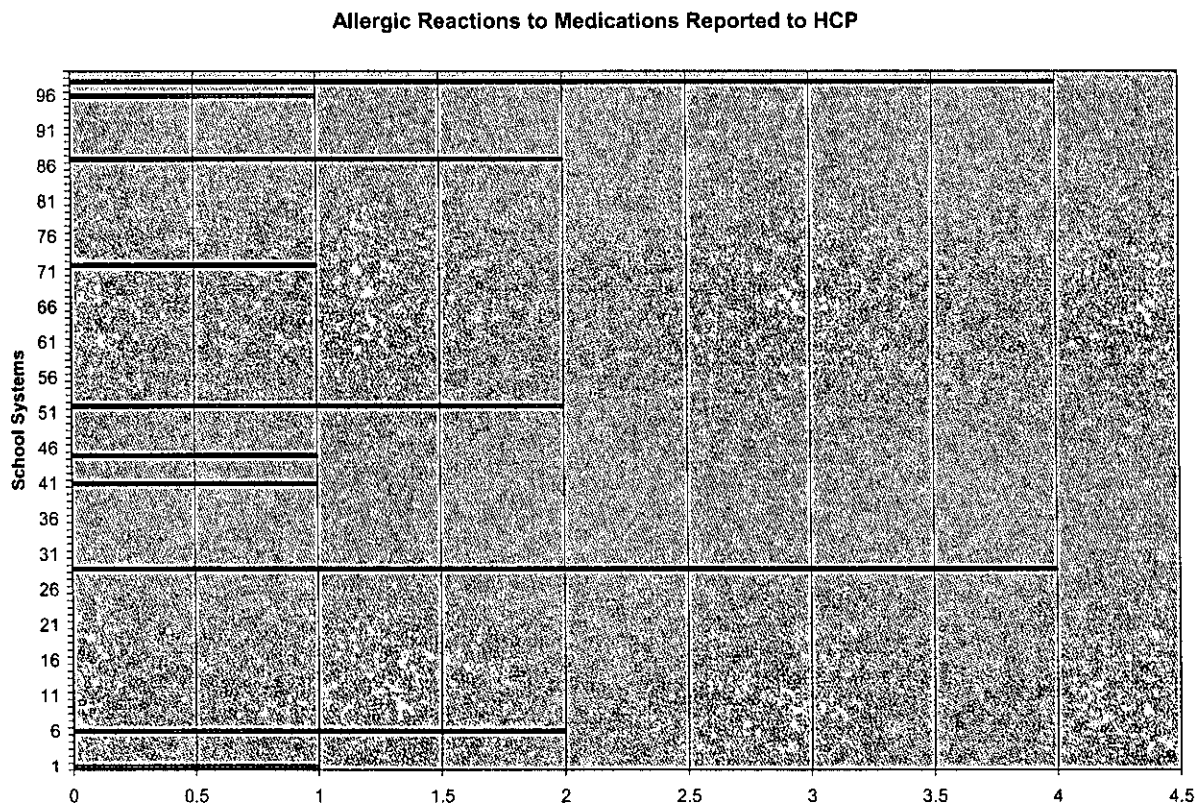
ITEM #32

NUMBER OF STUDENTS SENT HOME WITH PARENTS AFTER ALLERGIC REACTION TO MEDICATION



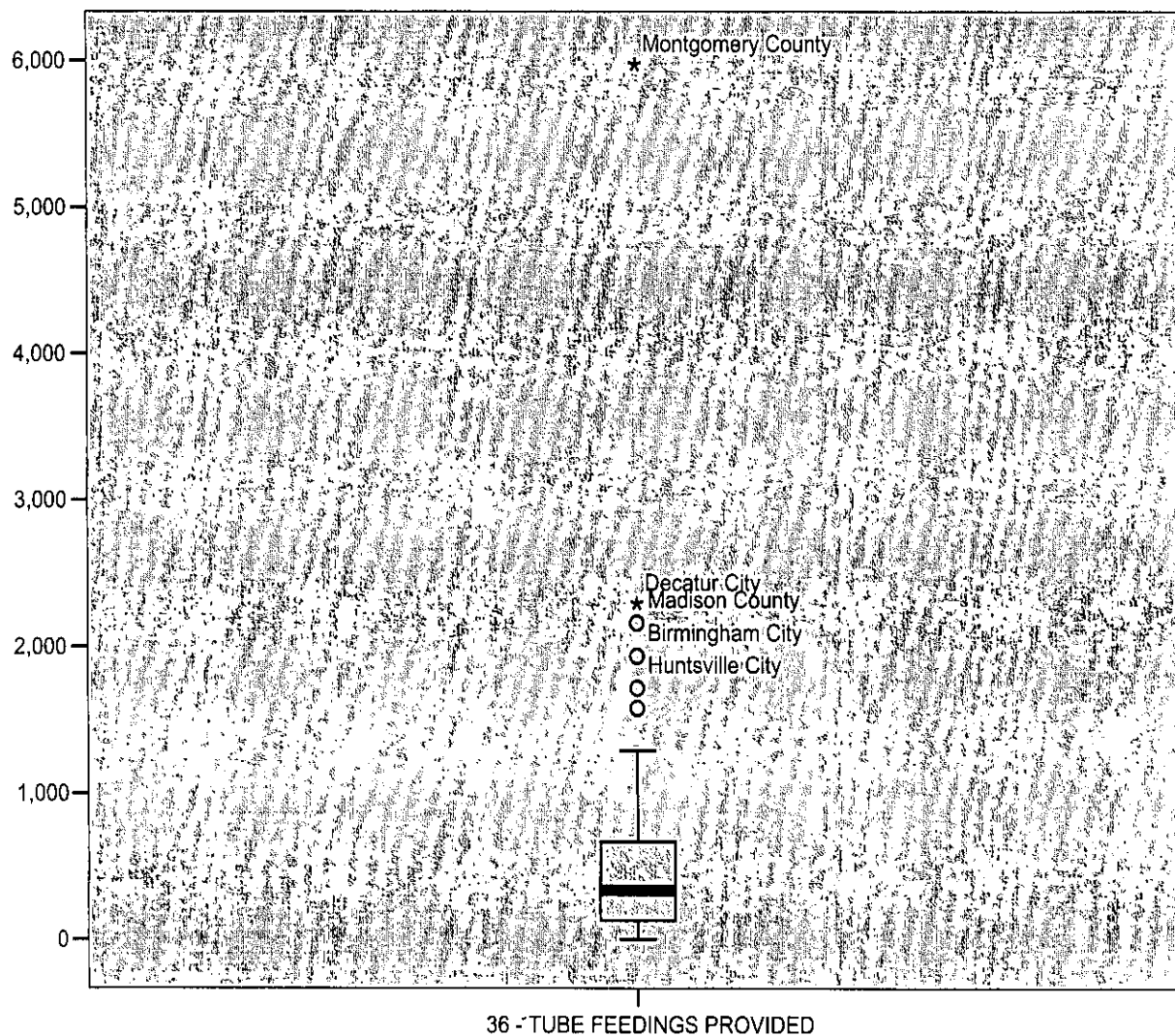
ITEM #33

**NUMBER OF STUDENTS SENT TO HEALTH PROVIDER AFTER ALLERGIC REACTION TO
MEDICATION**



ITEM #36

NUMBER OF TUBE FEEDINGS PROVIDED

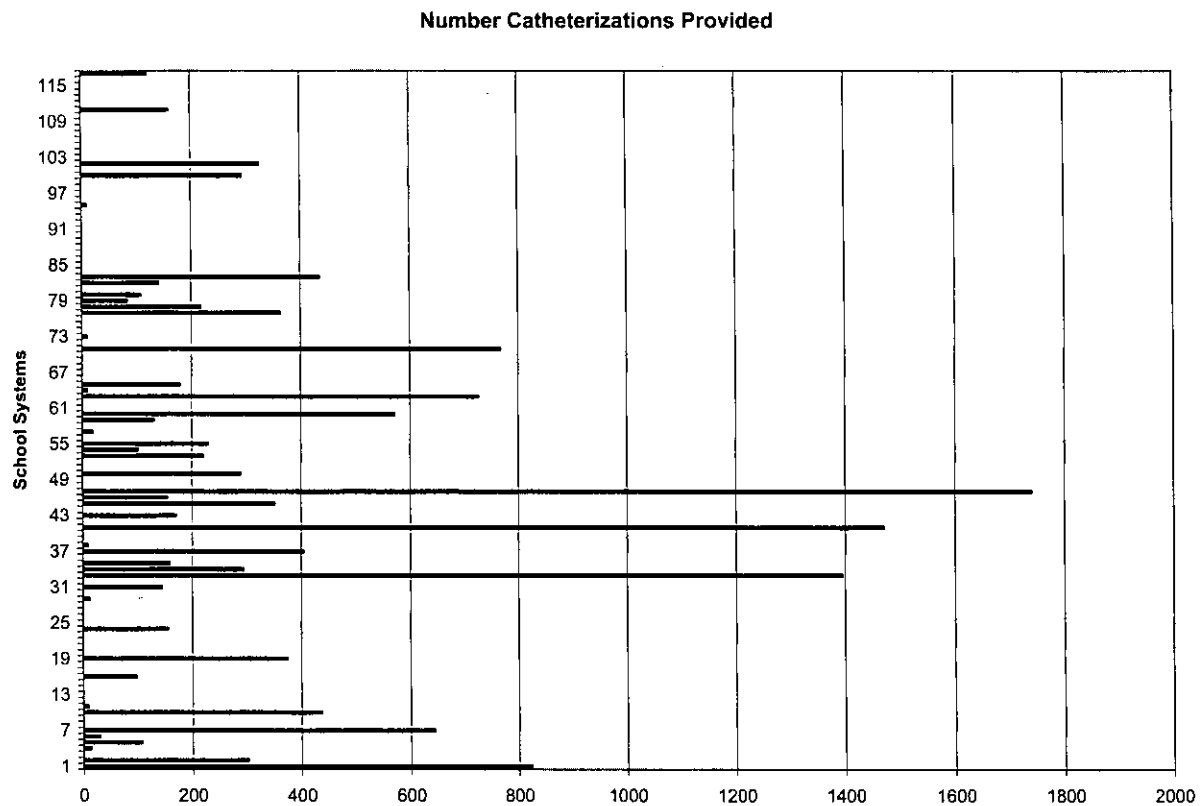


Note: The box plot chart illustrates outliers in these data and therefore calls into question the validity of these data.

- o Outlier
- * Extreme Outlier

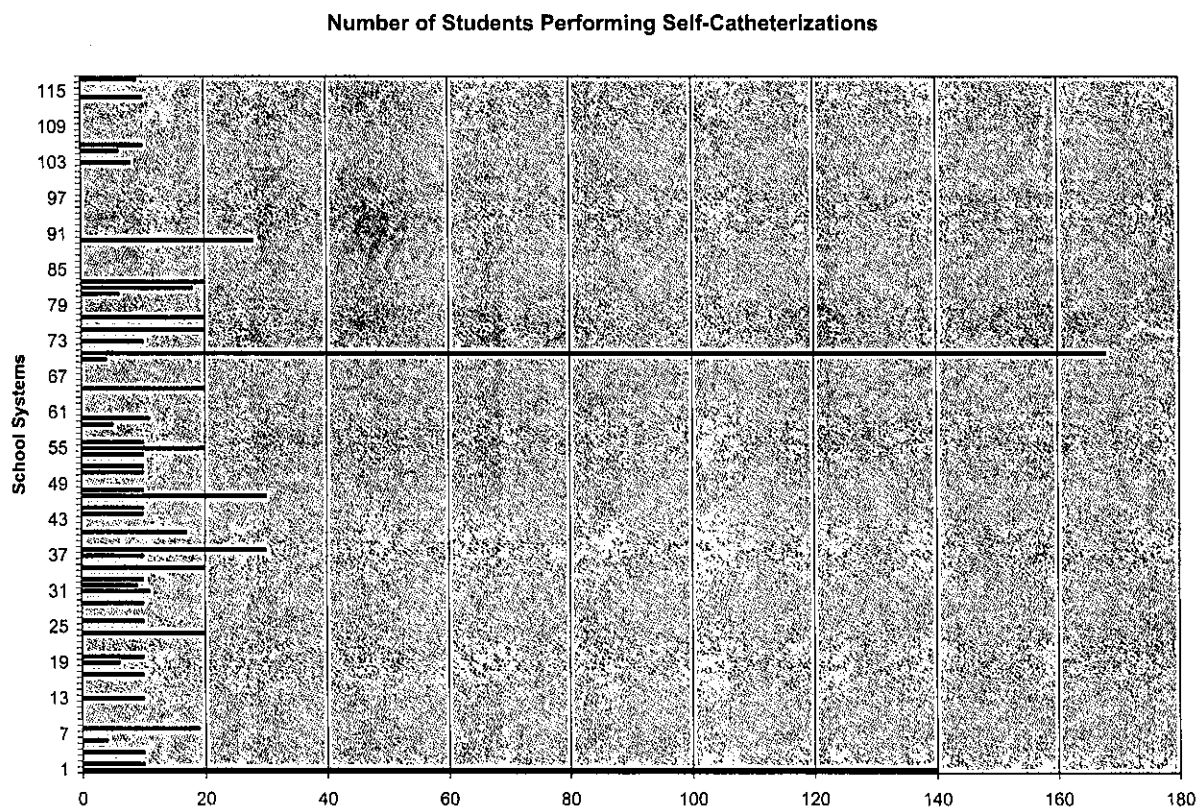
ITEM #37

NUMBER OF CATHETERIZATIONS PROVIDED



ITEM #38

NUMBER OF STUDENTS PERFORMING SELF-CATHETERIZATION



ITEM #41

NUMBER OF STUDENTS VENTILATOR DEPENDENT

ONE STUDENT REPORTED BY ONE SCHOOL SYSTEM AS VENTILATOR DEPENDENT